

THE COMPARISON OF HOUSING PATTERNS  
TRADITIONAL CHINESE WITH  
MODERN AMERICAN



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THE COMPARISON OF HOUSING PATTERNS

TRADITIONAL CHINESE WITH

MODERN AMERICAN

BY

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THESIS

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for the Degree of

Master of Architecture

THE UNIVERSITY OF TEXAS AT AUSTIN

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## PREFACE

This thesis is an analysis concerning the synthesis of Traditional Chinese Architecture and Modern Architecture, which is represented by Modern American Architecture. The thesis intends to present a basic understanding of the difference and similarity between them for further combination.

The outer spaces of a house in which patterns characterize the house as well as the comparison of patterns between the Traditional Chinese and the Modern American, have been my primary interest.

Very little work has been done from the point of view adopted here and this study must be exploratory. No thesis on such a vast subject can be final - and this one does not, in fact, represent a generally accepted or shared body of thought. Rather it is my personal interpretation of the evidence concerning the spaces in which patterns dominate and create its quality.

I am neither attempting to treat all the spaces within a house nor to offer world-wide comparison, but to mainly concentrate on the outer spaces in traditional Chinese and modern American houses.

The thesis tries to propose a creative idea for designing a modern Chinese house which preserves the traditional Chinese housing attributes and also reflects the essences of modern housing. It attempts to stimulate the reader's imagination in the unlimited creative field of design theory.

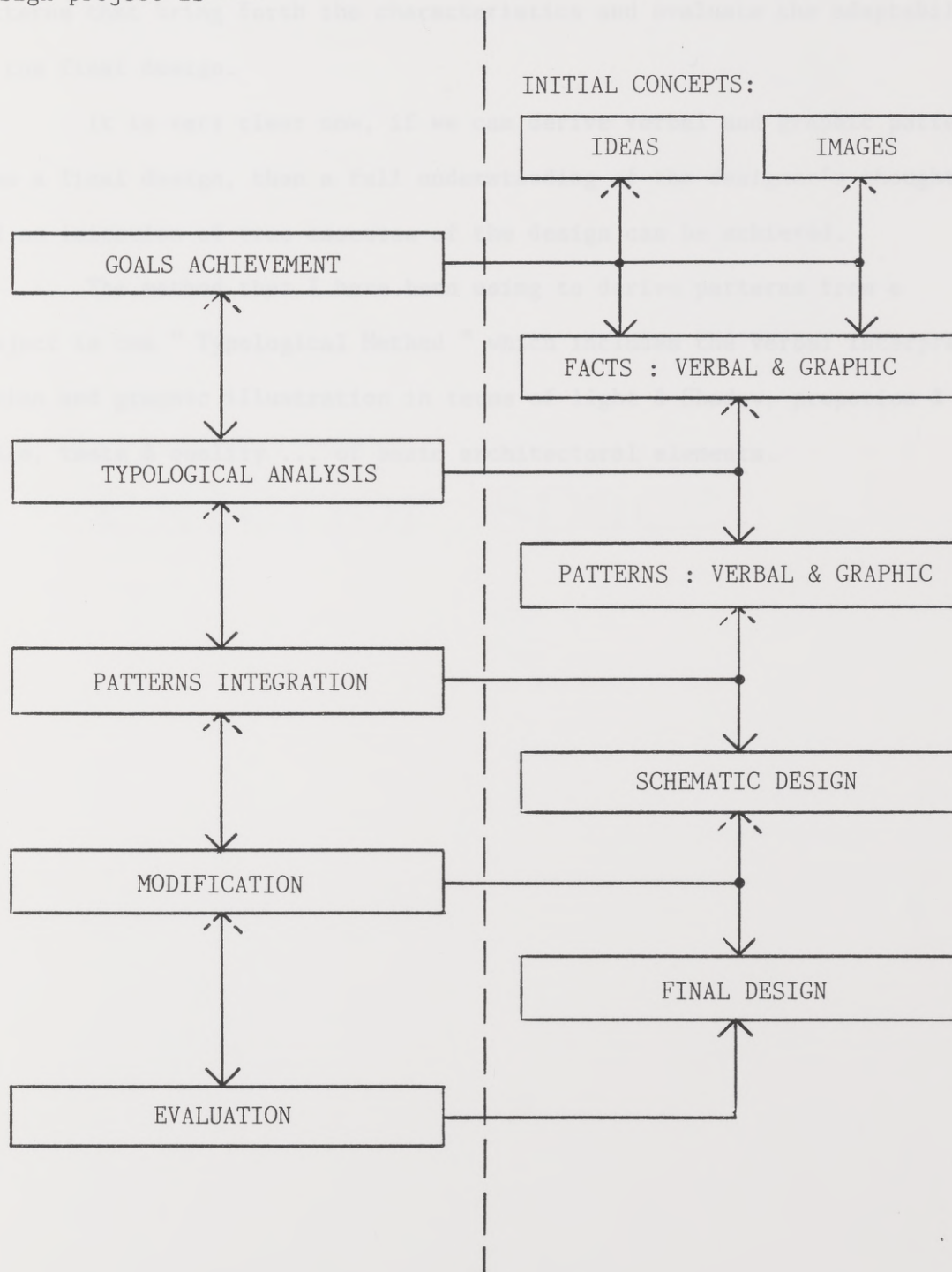
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## INTRODUCTION

The design process that has been adopted by myself to analyze any design project is —



From the above design process, we can see that every design has its beginning as verbal or graphic concepts. All these concepts will go through the typological analysis then become the verbal and graphic patterns that bring forth the characteristics and evaluate the adaptability of the final design.

It is very clear now, if we can derive verbal and graphic patterns from a final design, then a full understanding of the designer's thoughts and an imitation of true essences of the design can be achieved.

The method that I have been using to derive patterns from a project is the " Typological Method " which includes the verbal interpretation and graphic illustration in terms of light & Shadow, proportion & scale, taste & quality ... of basic architectural elements.

# CHINESE



## Chinese

The outdoor exterior spaces in the Chinese house are arranged in a certain pattern instead of randomness. The basic pattern is the four-sided enclosed courtyard building. When the pattern is multiplied, simultaneously, so is the exterior space.

The basic idea of composing outdoor spaces of a house is to blend the outdoor open areas with the closed indoor areas into an overall



# exterior space

-  Courtyard
-  Outdoor Space

By using both visual and physical means as a blending medium, the alternate variation between nature and artificiality is experienced.



The Traditional Chinese House

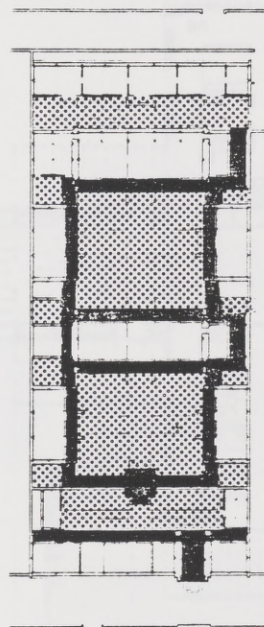


## BASIC PRINCIPLE

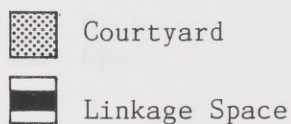
### Chinese:

The scattered exterior spaces in the Chinese house are arranged in a certain pattern instead of coincidence. The basic pattern is the four-sided enclosed courtyard building. When the pattern is multiplied, simultaneously, so is the exterior space.

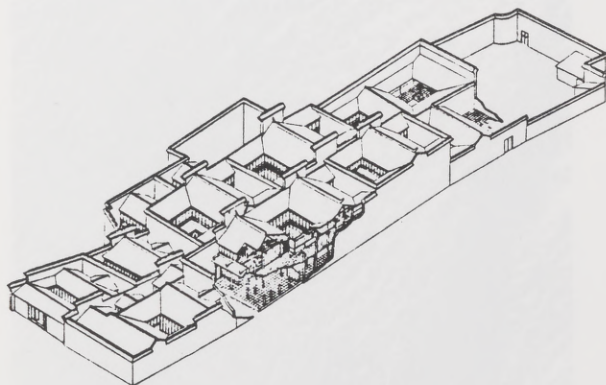
The main idea of composing exterior spaces of a house is to blend the outdoor open areas with the closed indoor areas into an integral part.



A Courtyard House in Peking.



By using both visual and physical access as a blending medium, the alternate variation between nature and artificiality is experienced.

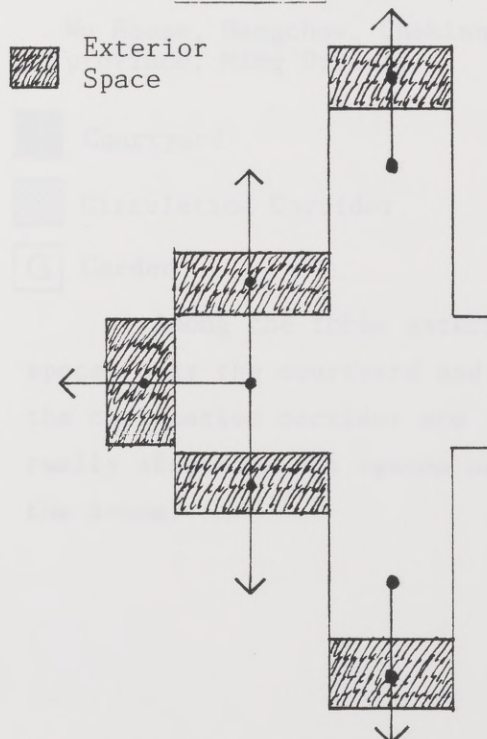


The Patterned Exterior Spaces.

American:

The exterior space of the modern American house is not as imposing as the interior space. Actually, most houses do not even have larger enclosed exterior spaces for outdoor activities. Because, subliminally, real outdoor living is recognized as the enjoyment of nature instead of constrained outdoor activity.

Moving from the basic recognition to the limited use of exterior spaces, most exterior spaces are arranged as appendant spaces of interior living spaces and extend to the external.



Private House, Eastern Shore,  
Maryland, 1982  
Architect: Hugh Newell Jacobsen.



## CLASSIFICATION:

## Chinese:

In terms of form and function of domestic exterior spaces, there are three major kinds of exterior spaces that can be defined:

## 1) Courtyard

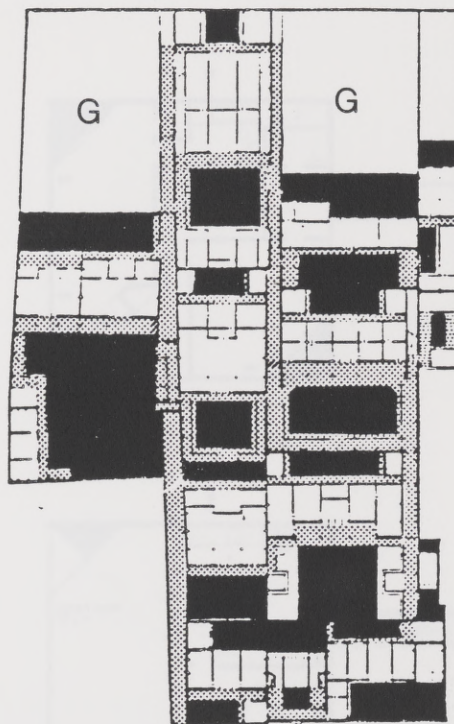
The four-sided enclosed outdoor living space.

## 2) Garden

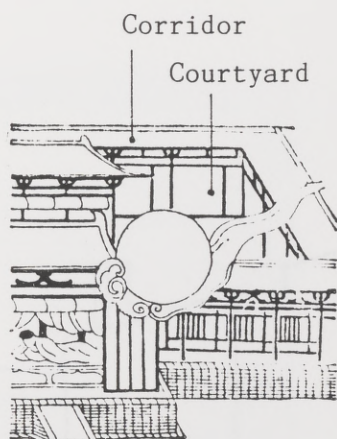
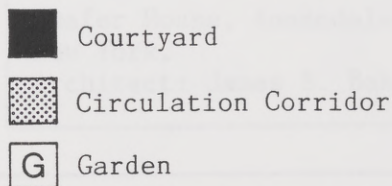
The irregular informal garden which simulates the essence of nature.

## 3) Circulation Corridor

The linear, semi-enclosed connection space of courtyard and garden.



Wu House, Hangchow, Chekiang province, Ming Dynasty.



Wall Painting, Tunhuang Cave, T'ang Dynasty.

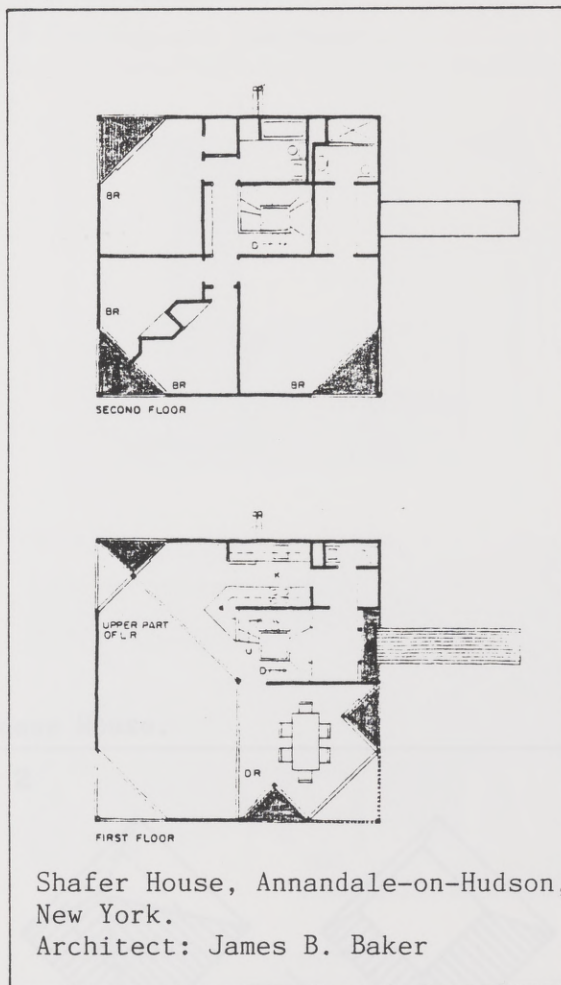
Among the three exterior spaces only the courtyard and the circulation corridor are really affecting the spaces of the house.

American:

The classification of American housing exterior space is more significant in how the space is formed rather than what its function is. There are five types of exterior space in terms of form:

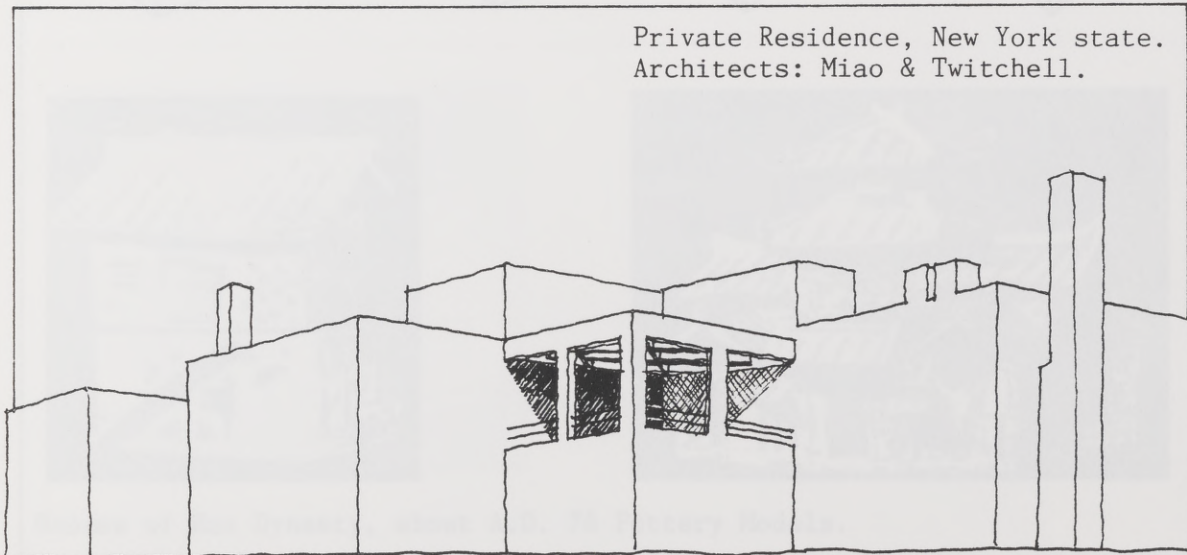
- 1) The cut-in exterior space.
- 2) The projected-out exterior space.
- 3) The enclosed exterior space.
- 4) The mutual biting space.
- 5) The inbetween exterior space.

1) The cut-in space.



2) The projected-out space.

Private Residence, New York state.  
Architects: Miao & Twitchell.





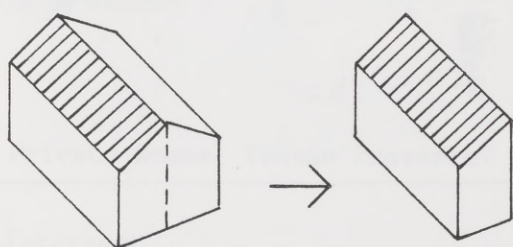
## SPACE ABOVE SLOPED-ROOF

Chinese:

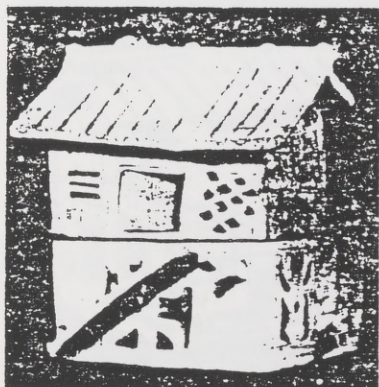
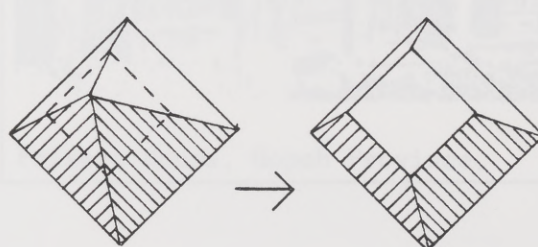
The spaces above sloped-roofs in the Chinese house all come out of some basic roof patterns which will be organized according to several principles forming the various spaces above roofs.

Two Basic Sloped-Roof Patterns of Chinese House.

1



2

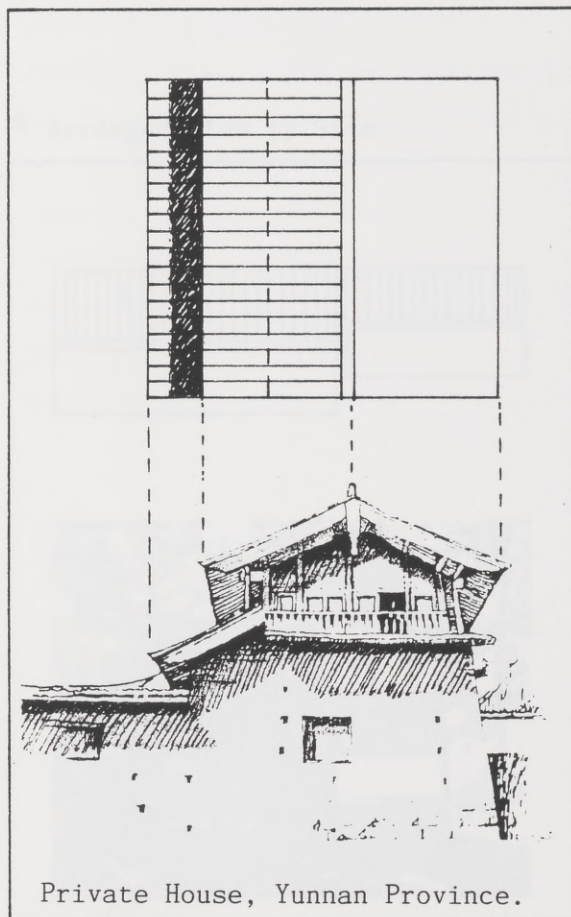


Houses of Han Dynasty, about A.D. 76 Pottery Models.

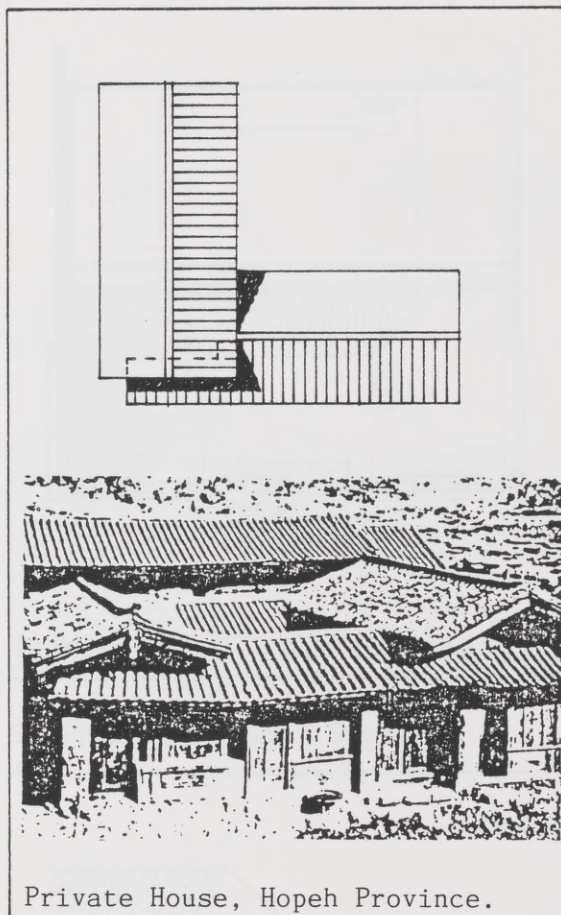


# Organizing Principles of the Roofs of Chinese Houses.

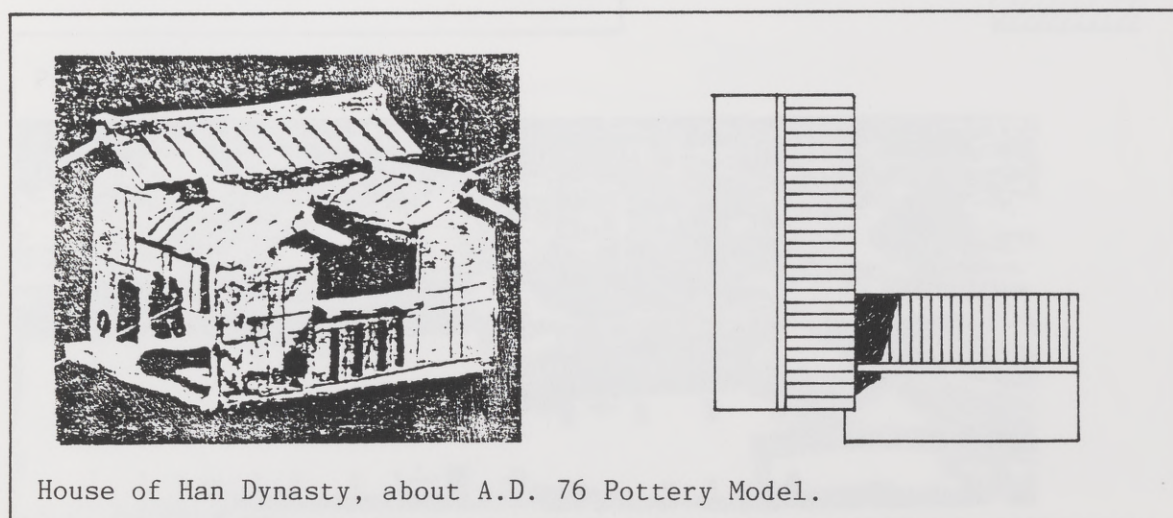
## 1 Overlap



## 3 Overlap and Intersect.

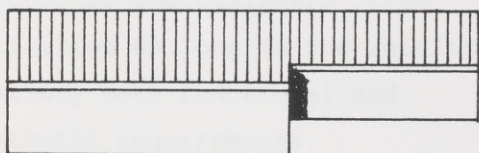


## 2 Intersect



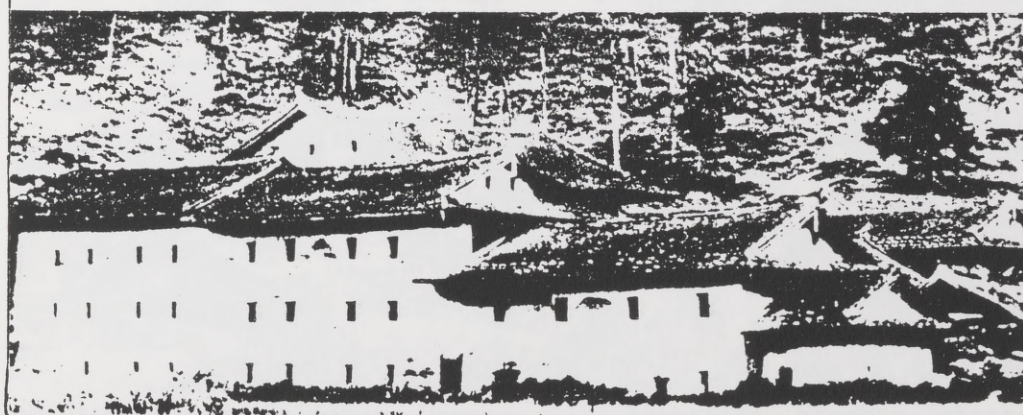


#### 4 Arranged Side by Side.

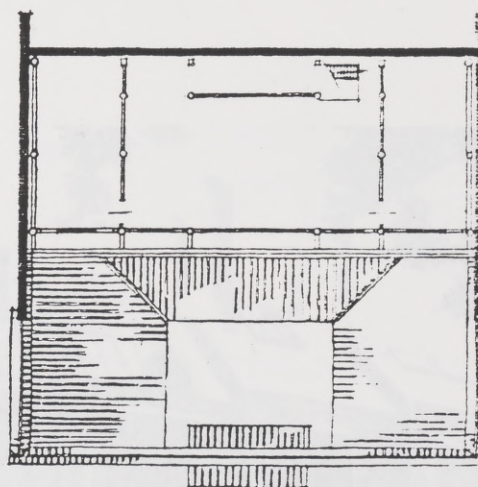


Private House, Yunnan Province.

Private House, Fukien Province.

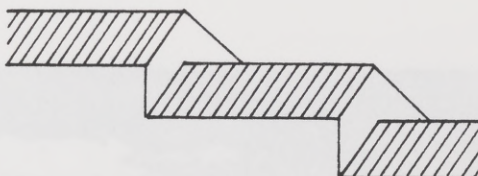


#### 5 Intersected Diagonally.



Private House, Anhui Province.

#### 6 Arranged in Stair Steps.





American:

The beauty of the space above the sloped-roof in the American house might be interpreted as "free and with no regulation."

Unlike the Chinese, the idea of forming the roof is to encourage the designers' creativities as long as the results satisfy both functional and esthetic requirements.



Private House, Central Penn.  
Architect: Hugh Newell Jacobsen.

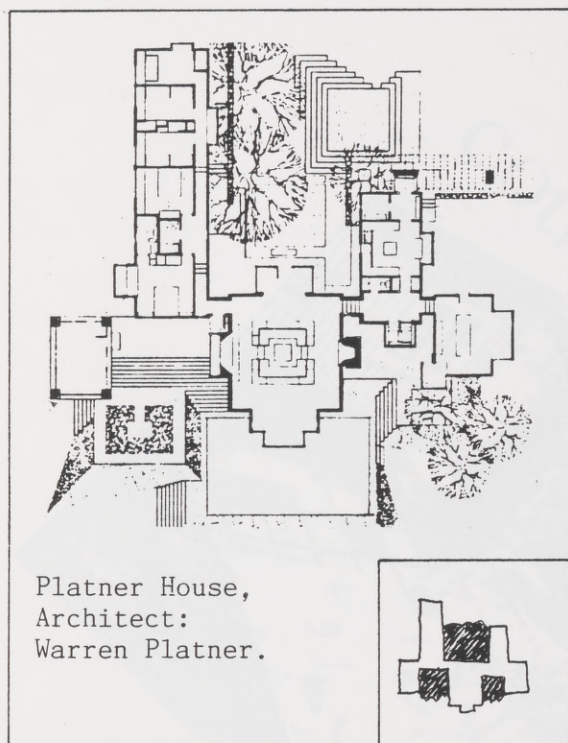


Johnston House, Salishan, Oregon.

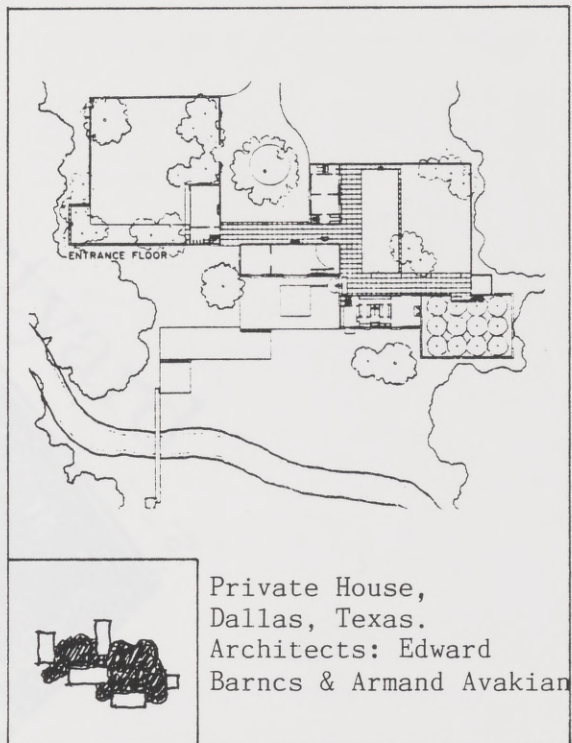
Architect: Stephen Johnston



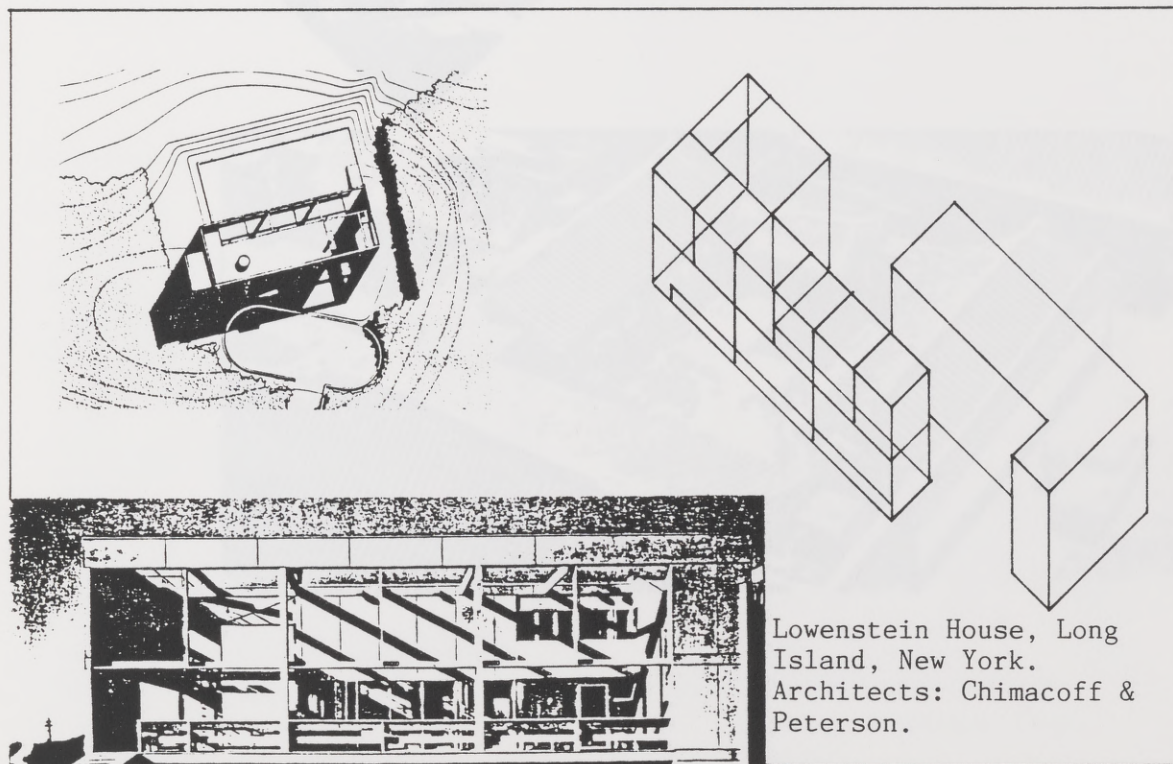
## 3) The enclosed space.



## 5) The inbetween space.

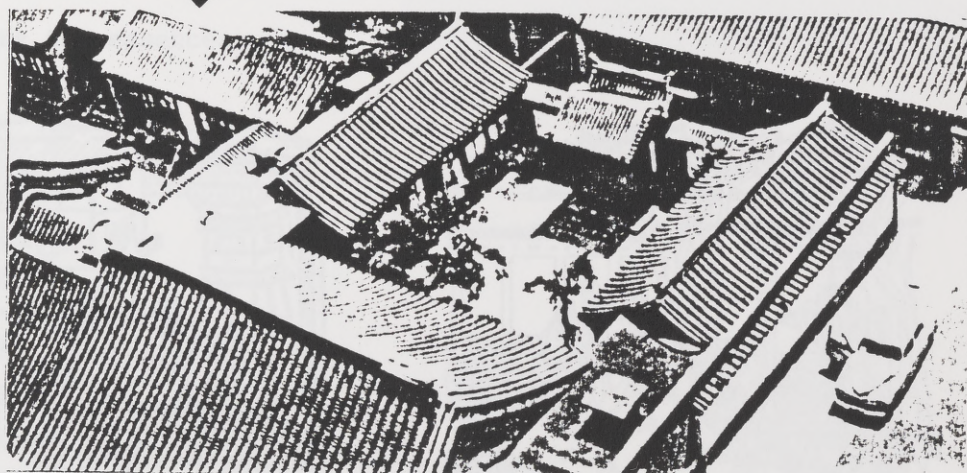
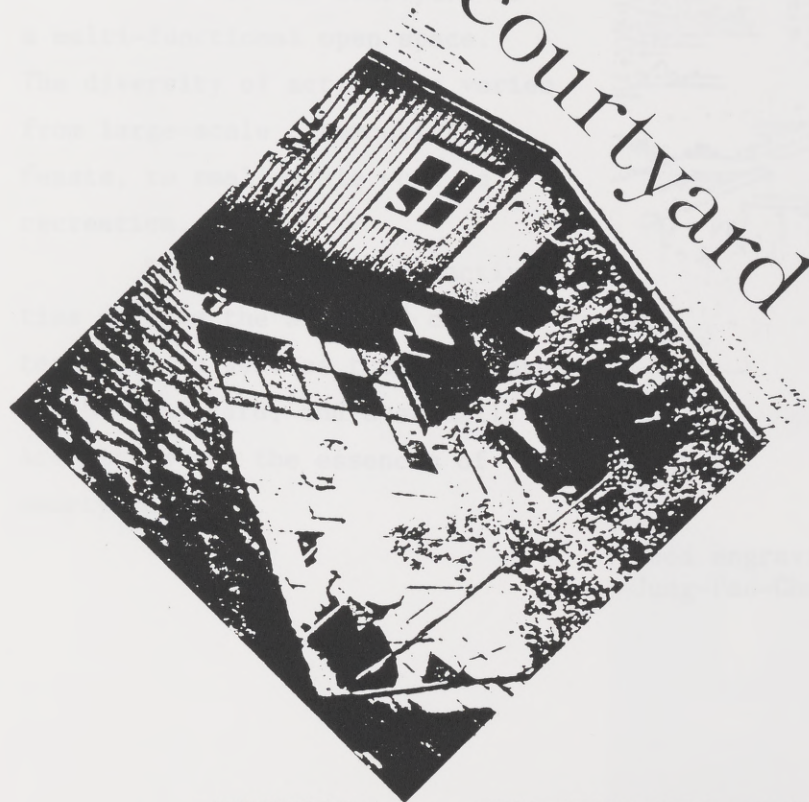


## 4) The mutual biting space.





# courtyard





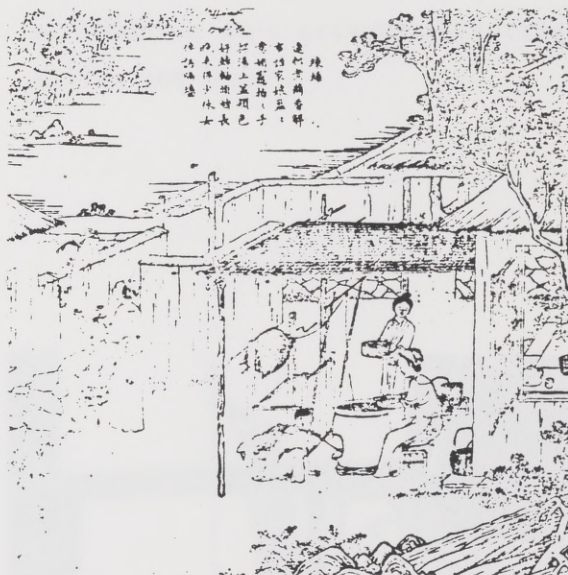
## ACTIVITIES

Chinese:

The Chinese courtyard is a multi-functional open space. The diversity of activities varies from large-scale ceremonial, feasts, to small-scale work to recreation.

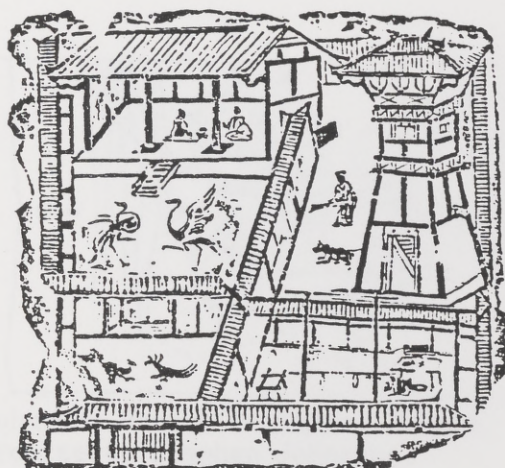
The essence of the activities defines the size and characteristics as well as the landscape of the courtyard, and eventually Activities are the essences of courtyards.

Courtyard is a place for working.



Wood engravings, Ming dynasty,  
Jung-Pao-Chai hand-printing shop.

Activities are the essences of  
courtyards



Molded Relief on Brick  
Han Dynasty.



Wall Painting, Tunhuang Cave,  
T'ang Dynasty.



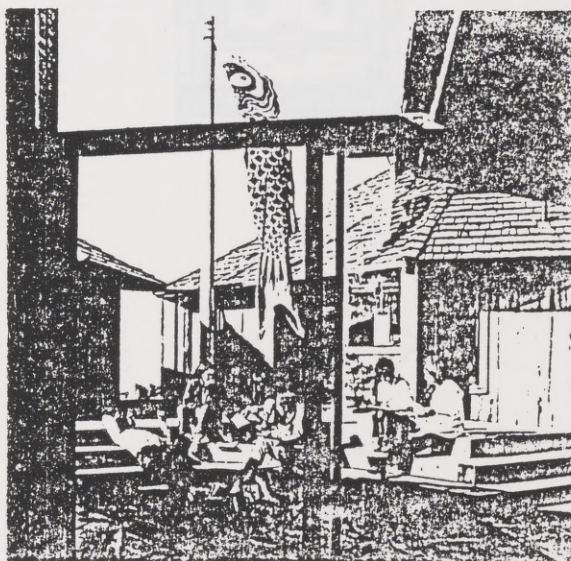
American:

Nature provides physical objects for men to enjoy. There are two basic ways to enjoy nature, one is more active and the other one is more stationary.

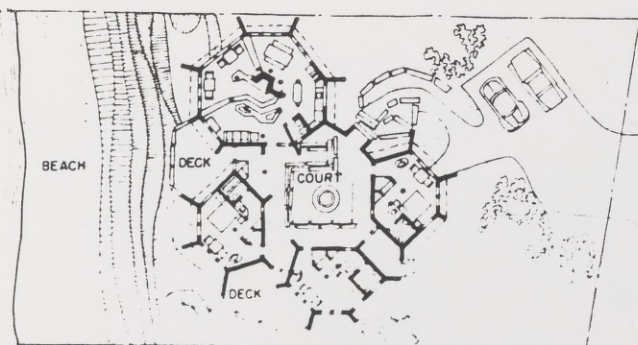
The courtyard in the American house is a place designed for the stationary way of enjoying nature. The active way of enjoying nature will be in the real natural world.

The difference between the courtyard-activity and the beach-activity has been clarified in the beach house.

The courtyard has a physical consistency with nature, but also accomodates more private activities unlike the beach.



The courtyard-activity.



Johnston House, Salishan, Oregon.  
Architect: Stephen Johnston.

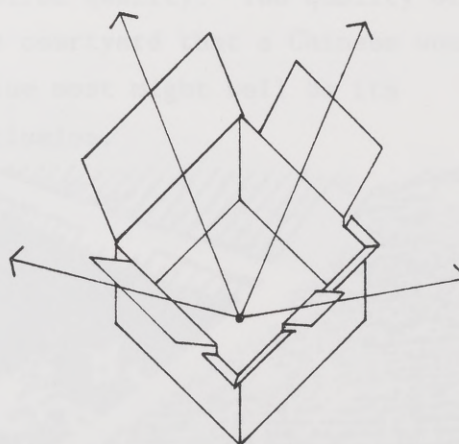
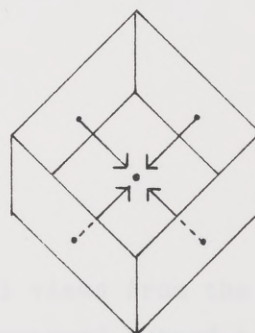
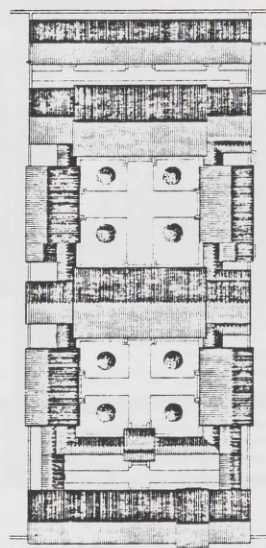
## VIEWS

## Chinese:

The Chinese courtyard completely enclosed by four vertical planes is probably the most introverted type of spatial definition in open space.

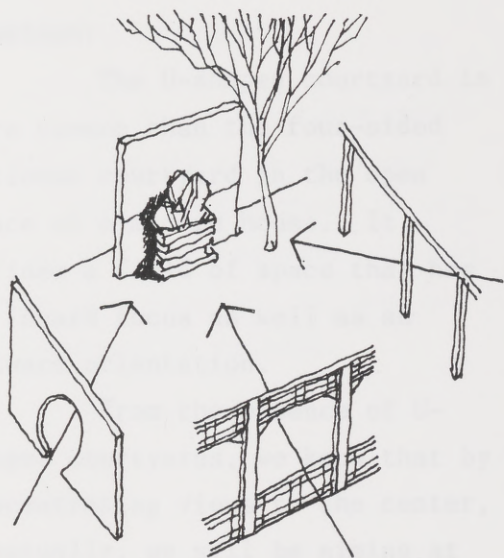
The views from the surrounding buildings all focus on the center of the courtyard in which there are always some interesting landscape or objects.

The reverse views from the center to the enclosing buildings and to their roof-edges are intended to have a quality of seclusion, if it is possible, of the outside world only the neighbouring tree-tops are visible.



Diagrams of the views within courtyard of a house in Peking.





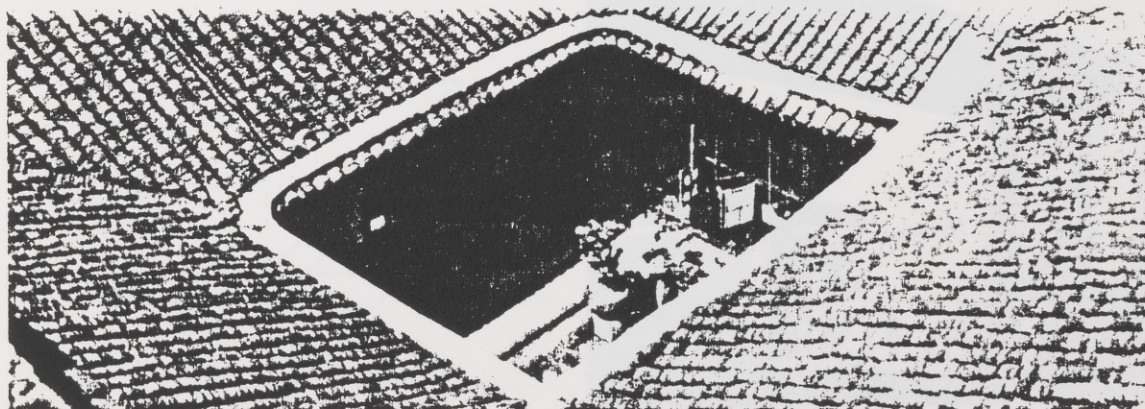
The stone-sculpture is the focal point of all the introverted views. Every vertical enclosure plane serves as a frame of the picture.



A small courtyard with stone-sculpture and planting.

The radial views from the center of the courtyard intend to have a desired quality. The quality of the courtyard that a Chinese would value most might well be its seclusion.

A Roof-View of a Courtyard.



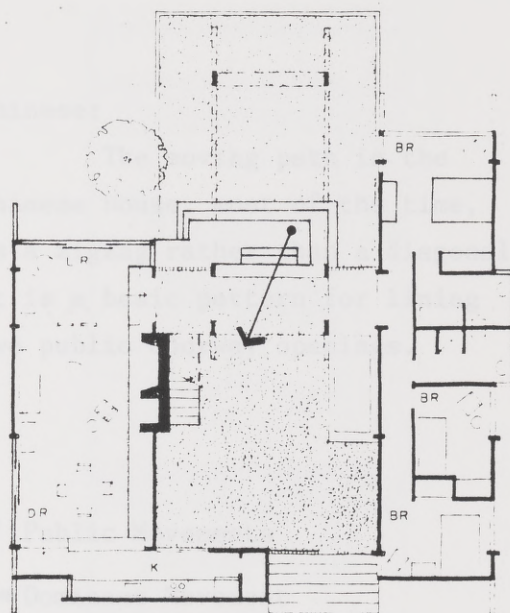
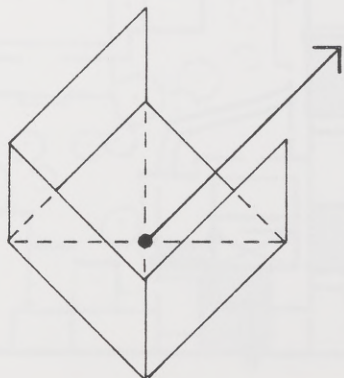


American:

The U-shaped courtyard is more common than the four-sided enclosed courtyard in the open space of a modern house. It defines a field of space that has an inward focus as well as an outward orientation.

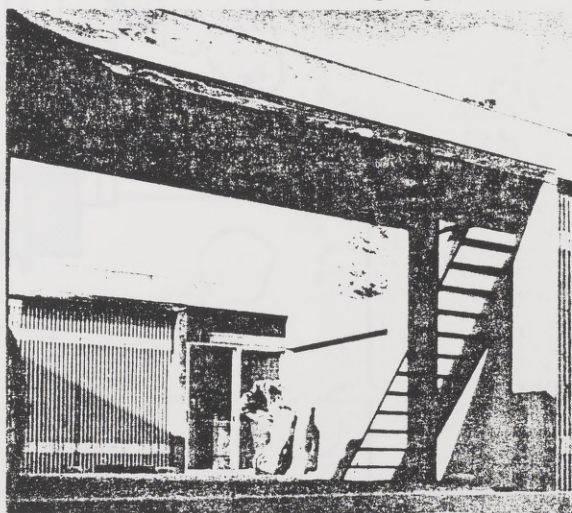
From the essence of U-shaped courtyards, we know that by concentrating views to the center, eventually, we will be aiming at the open end of the courtyard, where the field becomes extroverted in nature.

The reverse view, from the open end to the courtyard, is intended to have a receiving atmosphere by intensifying the enclosure elements.



Lam House, Cotuit, Mass.  
Architects: Erickson & Massey.

The doorway opening and the stair as well as the sculpture all intensify an inward congregation.





MOVEMENTS & DIVISIONS

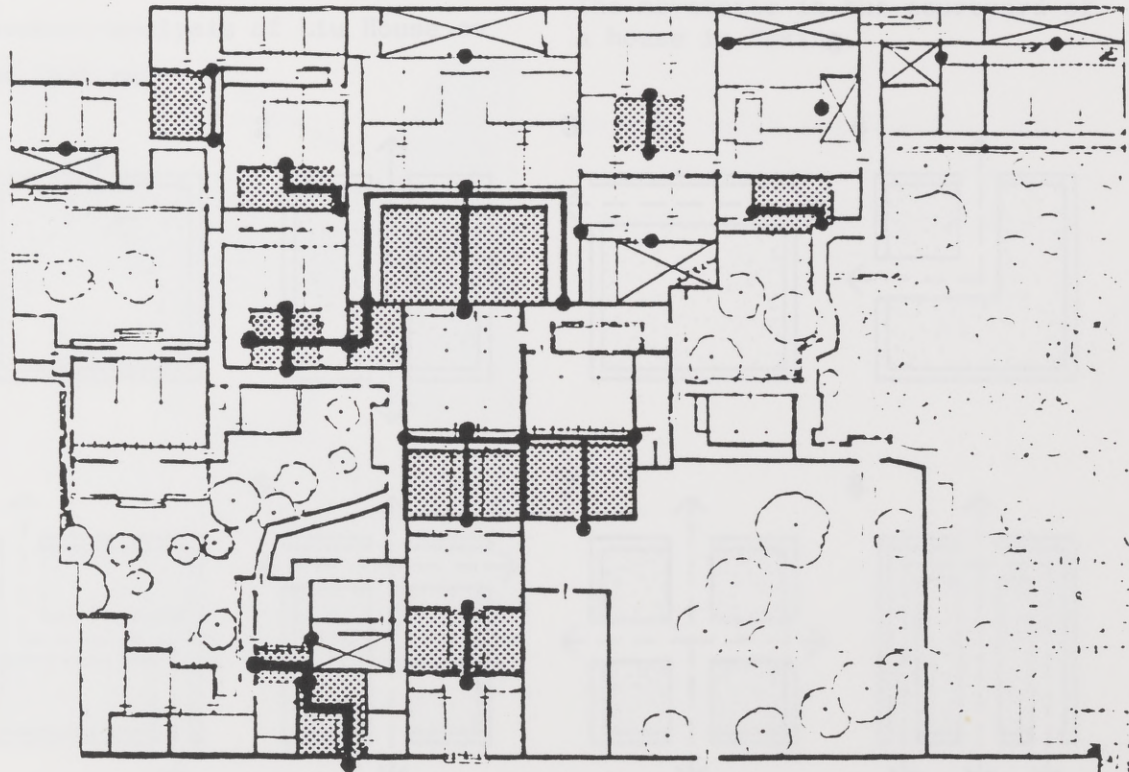
If we indicate the public doorway openings in a courtyard, and we line them together, it will tell us what the dominant movement through the courtyard is, and how the courtyard is divided.

Chinese:

The moving path in the Chinese house, most of the time, is a zigzag rather than a diagonal. It is a basic pattern for lining two public doorway openings.

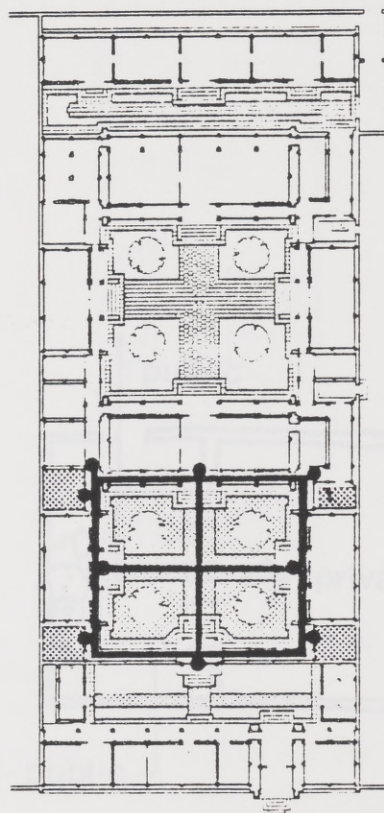
- Public Movements
- Dominant Movement
- ▨ Courtyards
- ▣ Courtyards without Dominant Movement.

Liu House, soochow, Kiangsu Province.



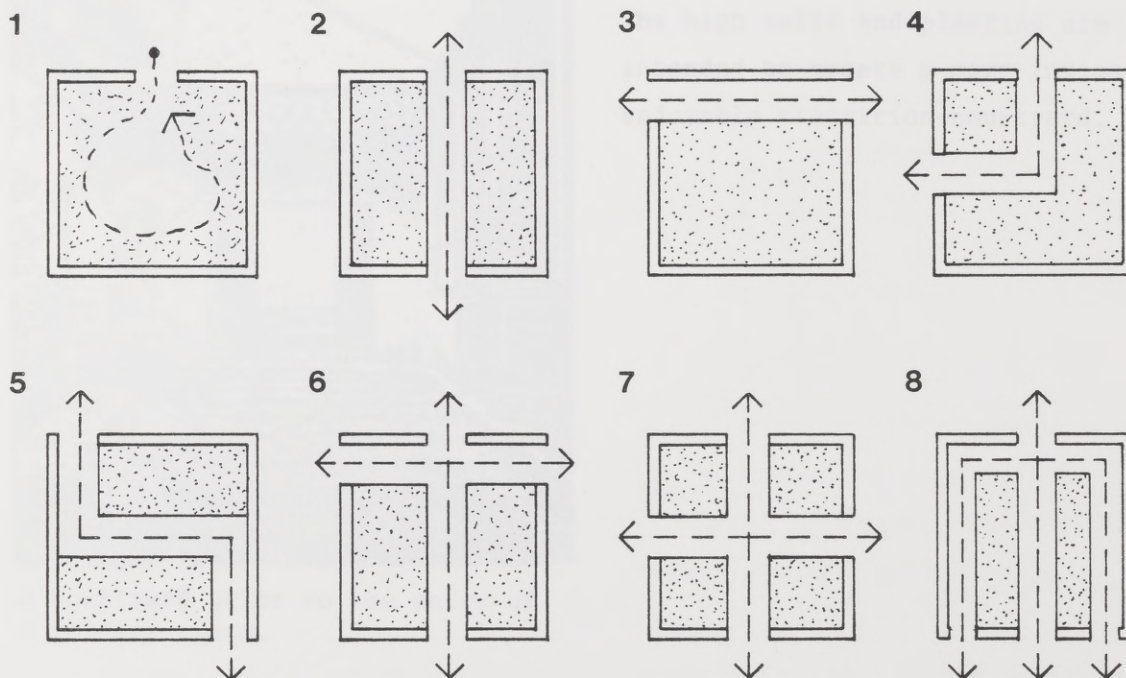
The Chinese courtyard is, functionally, not only a place for outdoor activities but also a place for circulation.

The courtyards are intended to be divided into several parts in order to have a symmetrical landscape with strong axial paths passing through.



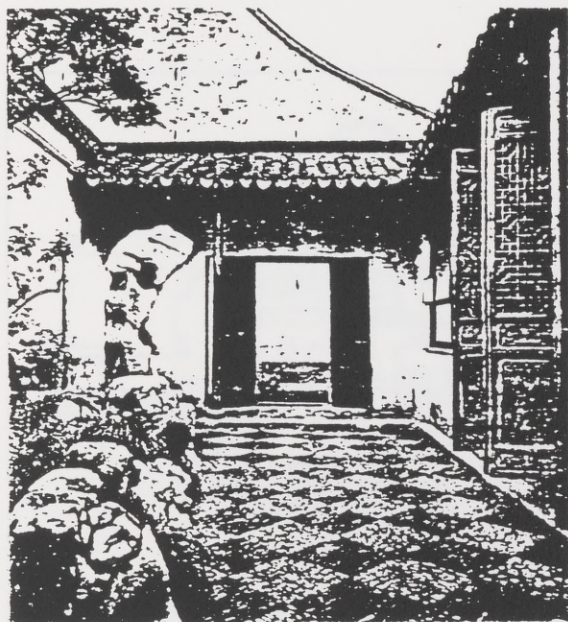
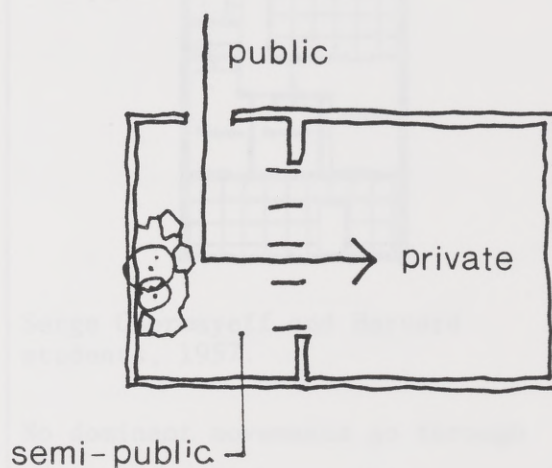
The patterns of movement and area-division derived from the movement-analysis of Liu House on the last page:

The movements in the courtyard of a house in Peking.





The courtyard has a transitional function in the entering movement from the courtyard to the surrounding living areas. It serves to decrease the feelings of openness as one passes from the public area to the more private area.



A courtyard prior to the entry of a private space.

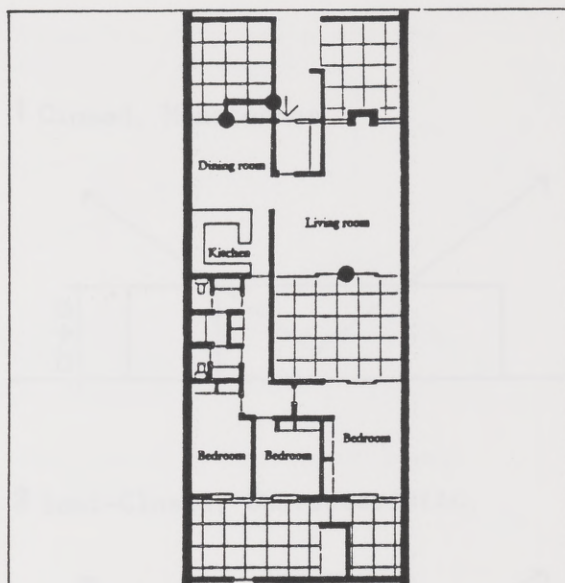
The high walls and planting are intended to create a more intimate, enjoyable transition-courtyard.



American:

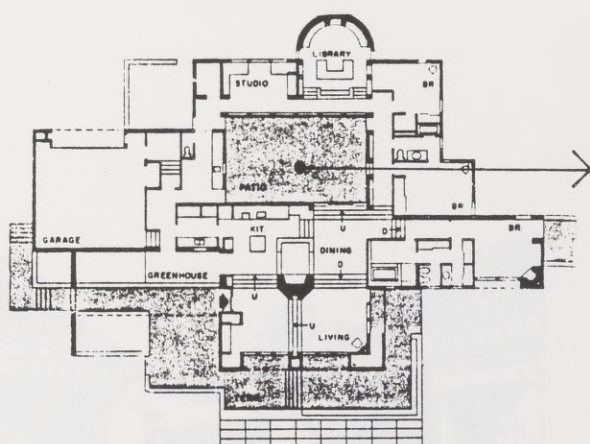
To an American, the courtyard is an integral part of the house in which the family lives and enjoys stationary outdoor activities.

In order to obtain the desired quality of a courtyard, the dominant movements are not allowed to divide the integral courtyard and interfere with the outdoor living area.

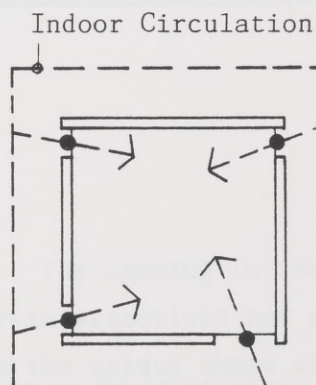


Serge Chermayeff and Harvard students, 1957.

No dominant movements go through courtyards. It keeps the courtyard as an integral part for outdoor living.



Brague House, Santa Fe, New Mexico,  
Architect: Antoine Predock.



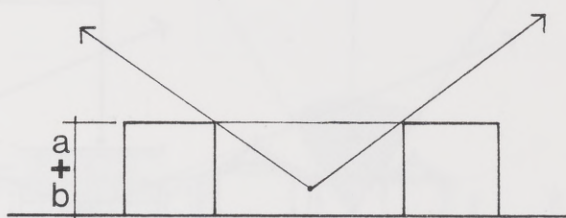
The courtyard becomes a place for gathering movements rather than having divided movements.

## ENCLOSURE ELEMENTS--ROOFS &amp; FLOOR

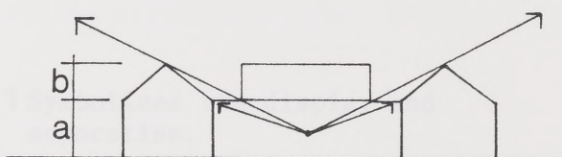
## Chinese:

The sloped roof is a very important element of the courtyard in defining the enclosure space. When a courtyard has been widened in order to have enough space for large outdoor activities, the roofs begin to serve as the enclosure elements, for the entire roof-surfaces can be seen in stead of just roof-edges by the views from the center of courtyard to the roofs.

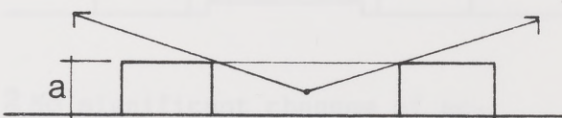
## 1 Closed, Monotonous.



## 2 Semi-Closed, Characteristic.



## 3 Open, Monotonous.



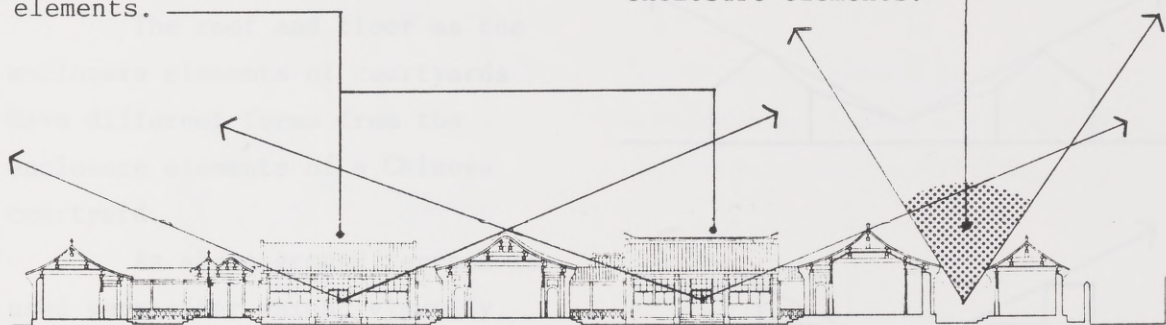
The opening in the corner of roof-intersections not only reveals the unique shape of each roof but also brings more outer nature into the courtyard.

Corner of a courtyard of a house in Peking.



Visually, the roofs are enclosure elements.

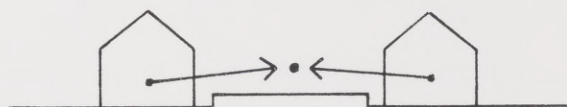
Visually, the roofs are not enclosure elements.



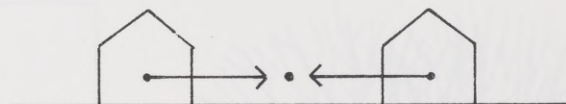
Section of a Courtyard house in Peking.

When the ground floor is lower than the adjacent living area, Physically, it increases the intensity of enclosure, and psychologically, it tells the people that the courtyard is a unique place to be enjoyed by stepping in and devoting yourself to it.

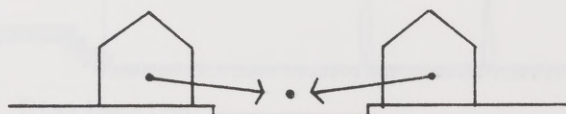
**1** Symbolizes the display and separation.



**2** No significant changes of activities from inside and out.



**3** Emphasizes the introversion and participation.



American:

The roof and floor as the enclosure elements of courtyards have different forms from the enclosure elements of a Chinese courtyard.

An above-ground terrace is used very often which, visually, has the same effect as the sloped-roof as the enclosing element.

In the floor, the level changes are used to indicate the continuity and distinction between adjacent spaces.

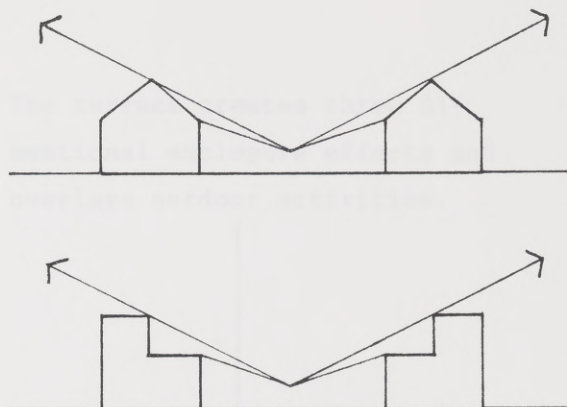
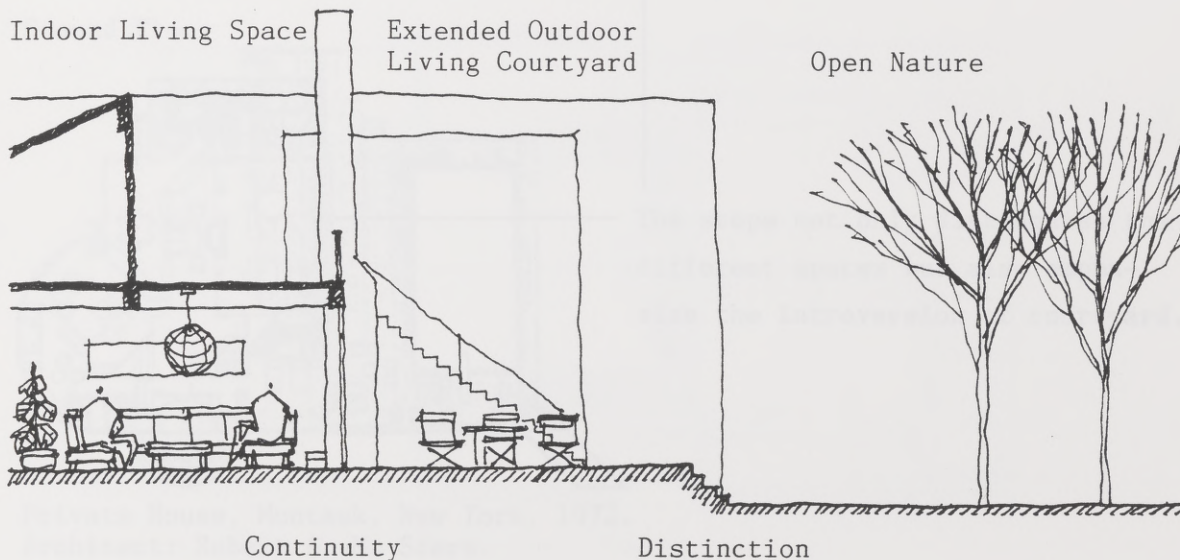
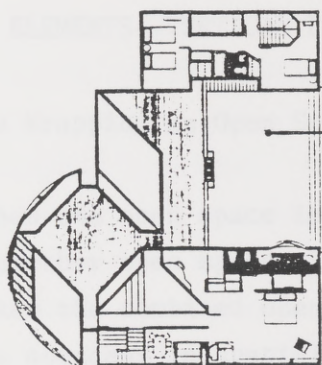


Diagram of visual effect of the sloped-roof and terrace.

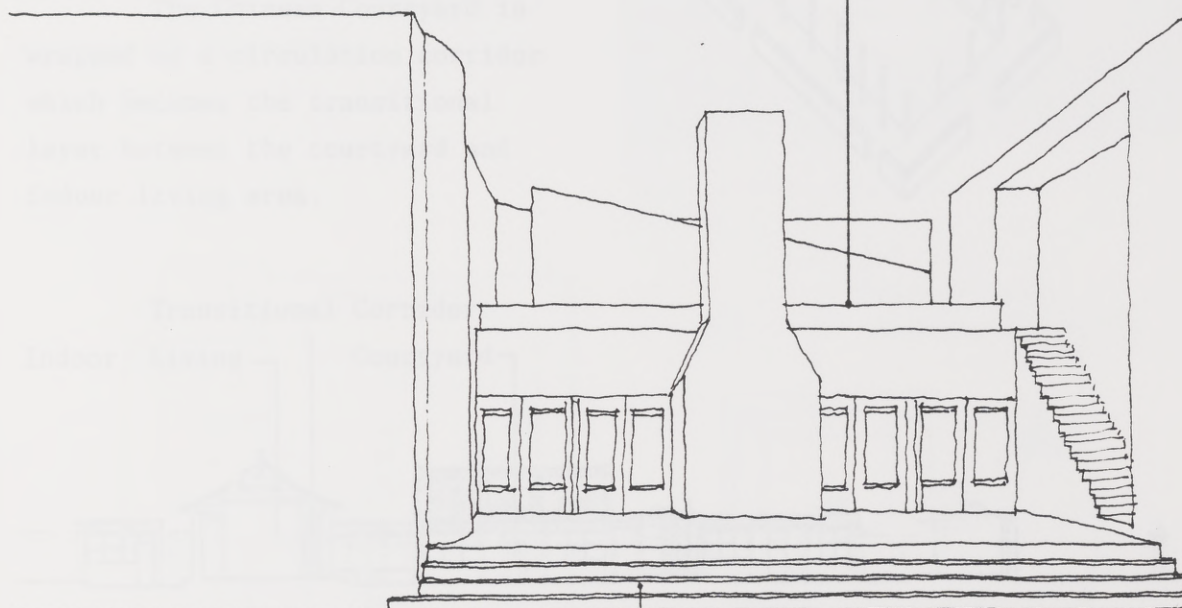






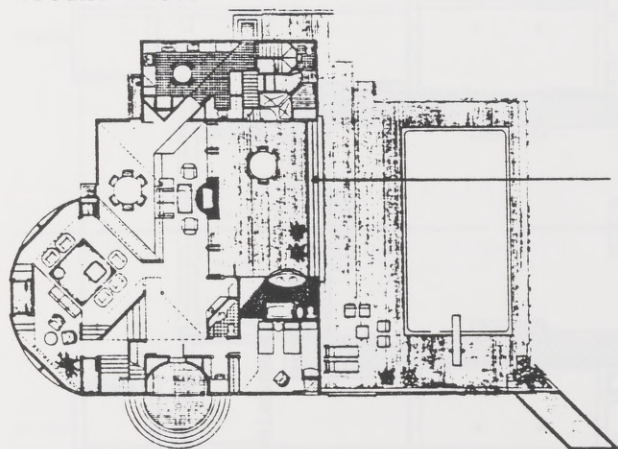
Second Floor

The terrace creates three dimensional enclosure effects and overlays outdoor activities.



Ground Floor

The steps not only distinguish the different spaces but also emphasize the introversion of courtyard.



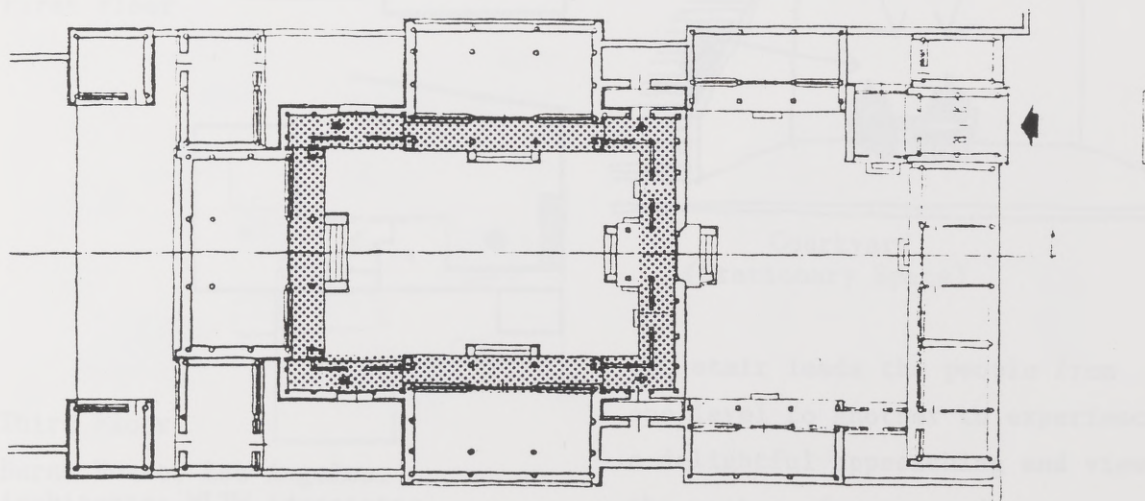
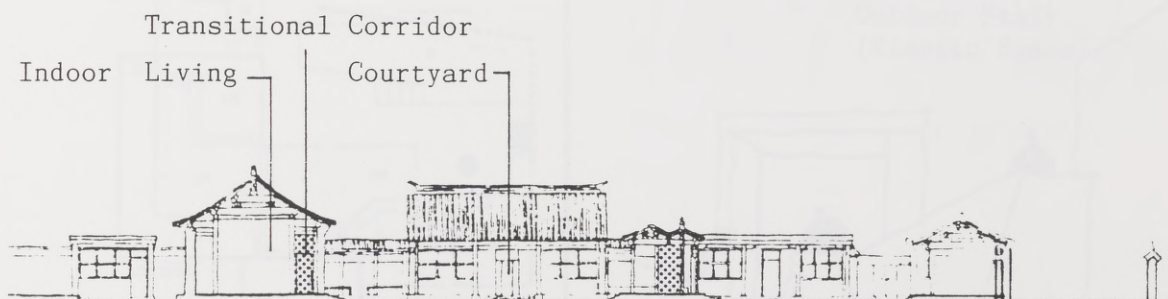
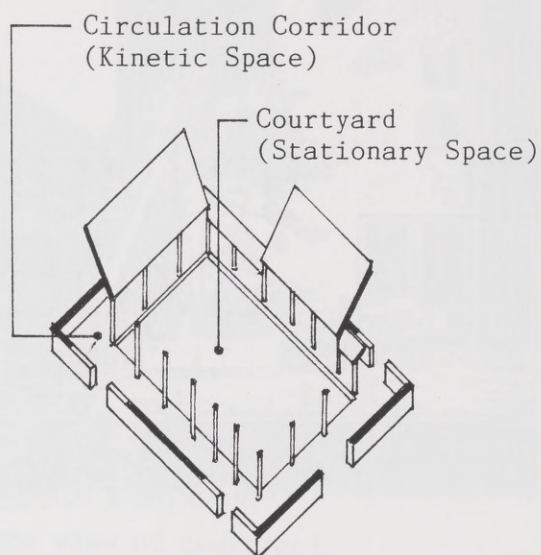
Private House, Montauk, New York, 1972.  
Architect: Robert A. M. Stern.

## ENCLOSURE ELEMENTS--VERTICAL PLANES

Open Space Wrapping an Open Space:  
Chinese:

When one open space is wrapping another open space, it always makes the combined open space more abundant in spatial variety and quality.

The Chinese Courtyard is wrapped by a circulation corridor which becomes the transitional layer between the courtyard and indoor living area.

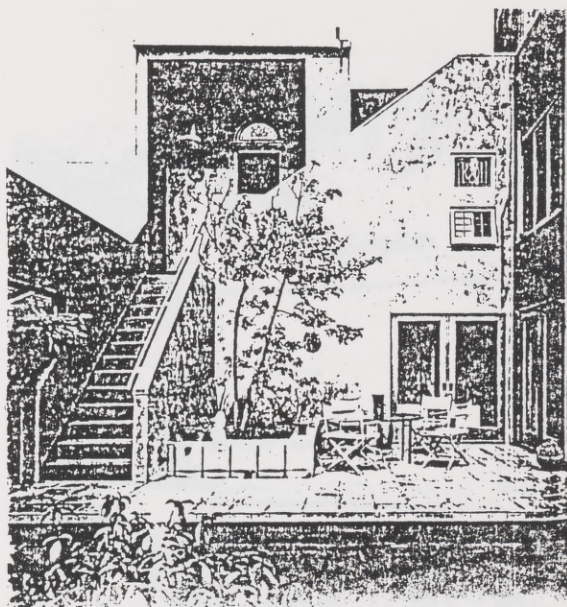


Private Courtyard House, Di An Men, Peking.

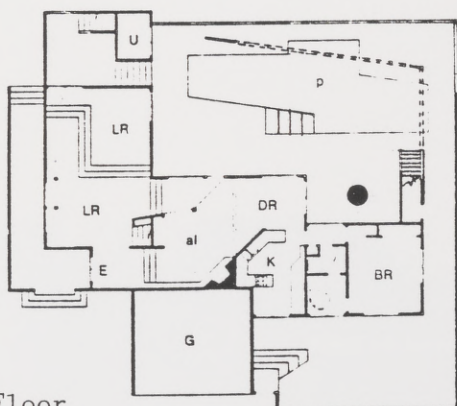


American:

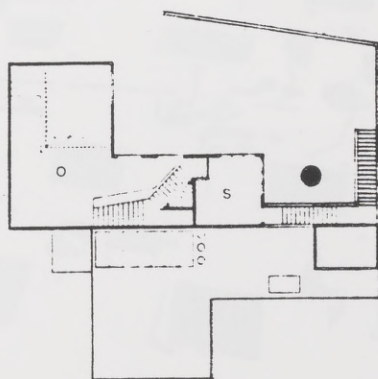
The idea of one open space wrapping the courtyard space is more dramatically arranged. Variations of outdoor open spatial elements have been utilized to enclose a courtyard -- stairs, terraces, bridges even corridors in which the essences have been extended beyond their functions to enclose the courtyard.



The view of courtyard.

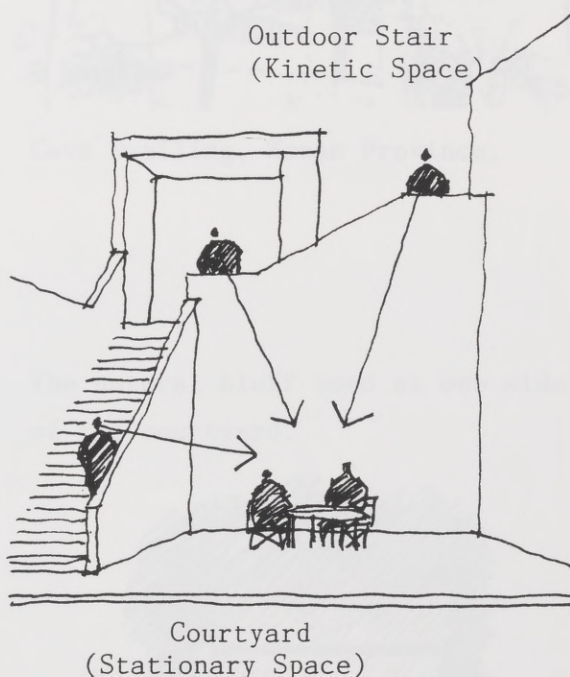


First Floor



Third Floor

Burns House, Los Angeles.  
Architects: MLTW Associates.



The stair leads the people from one level to another to experience a delightful approaching and view the center of courtyard.

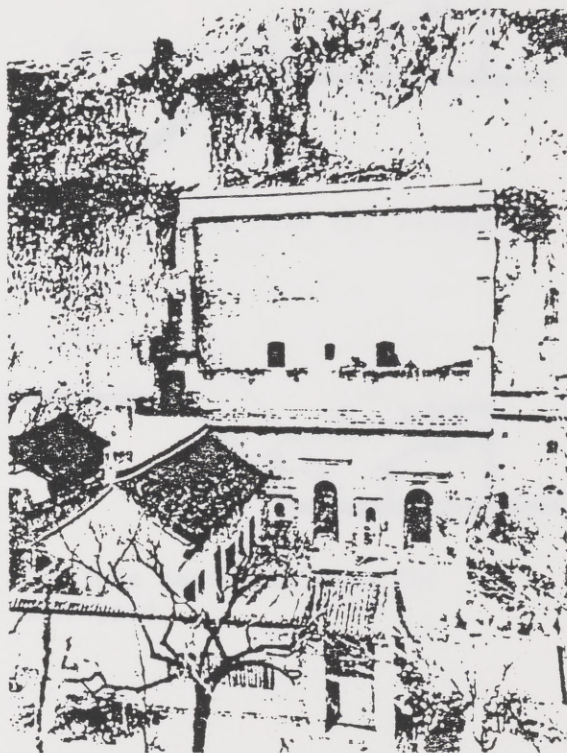


## Implementation of Nature

### Chinese:

The appreciation of the security provided by natural barriers is built into the Chinese house.

The troglodyte courtyard house below not only shows the appreciation of coolness and privacy given by earth but also mingles itself with nature in which the substantiality and constraint have participated in the house entity.

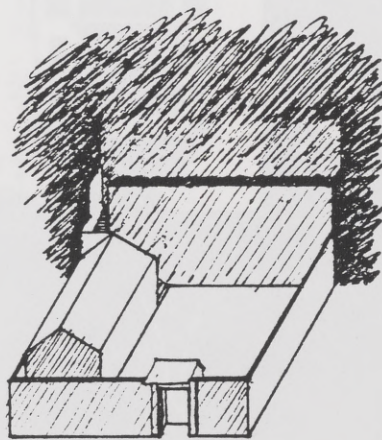


Cave Dwelling, Honan Province.



Troglodyte Courtyard House, Tungkwan, Honan Province.

The natural bluff used as one side of the courtyard.

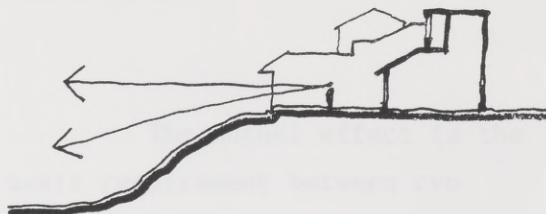




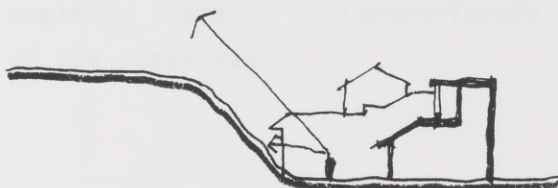
American:

The American courtyard house appreciates nature in a way opposite to the Chinese.

The open, wide views and enjoyment of the vastitude of nature are the desired qualities of a courtyard in which the focus is unlimited nature.



The preferable site for courtyard.



The less desirable site for courtyard.

Platner House  
Architect: Warren Platner.

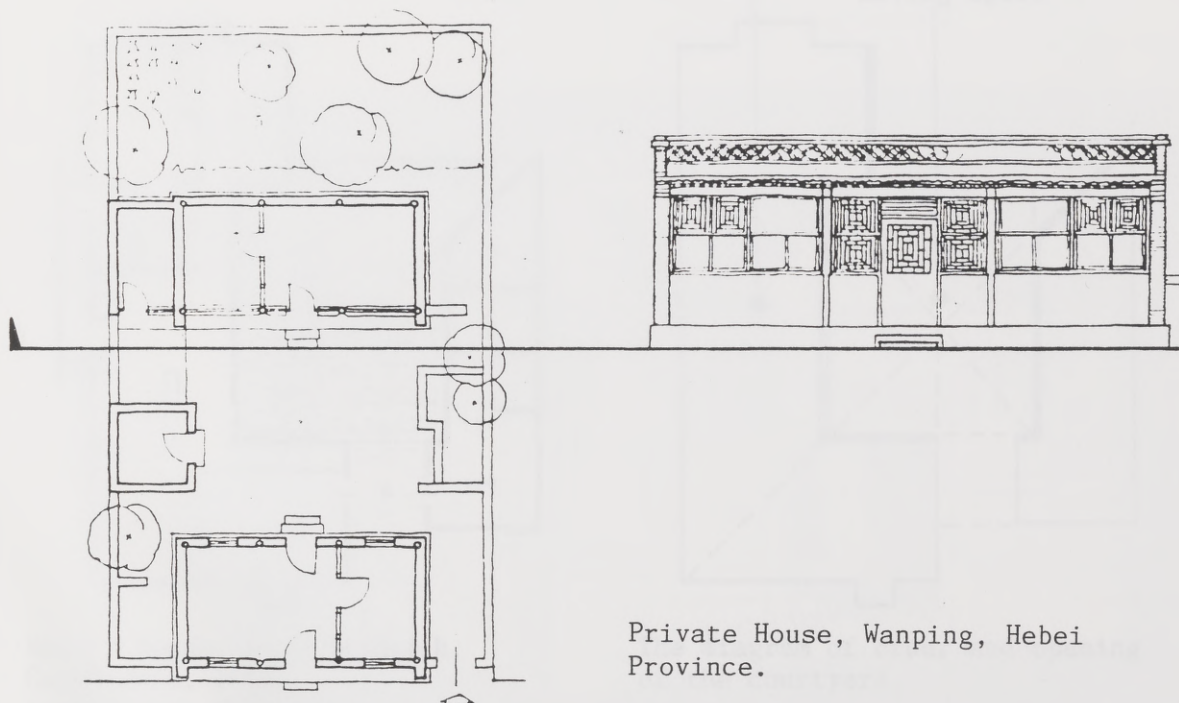


## Facades of Enclosure

### Chinese:

The design of courtyards and enclosure-facades are two separate matters in the Chinese house. The quality of a courtyard often depends on its landscape as well as activities, and the design of openings of enclosure-facades is mainly for views out to the courtyard. Eventually, the facades are designed first, and the courtyard is just a result of building arrangement.

The mutual effect is the basic requirement between two related objects. In the example below, the facade is only designed as an exterior elevation and neglects being an enclosure-facade of the courtyard.

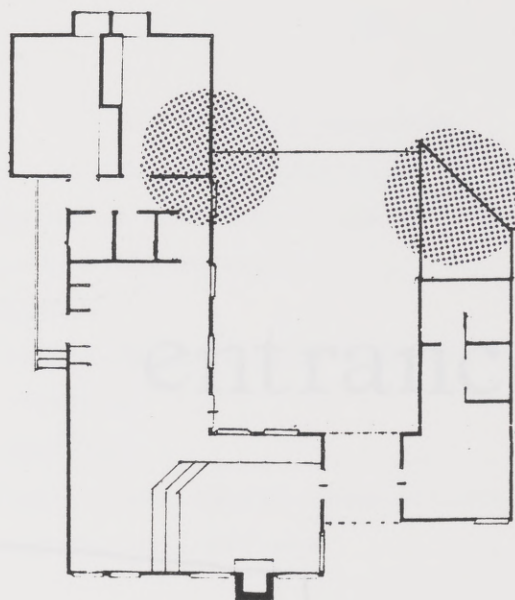


Private House, Wanping, Hebei Province.

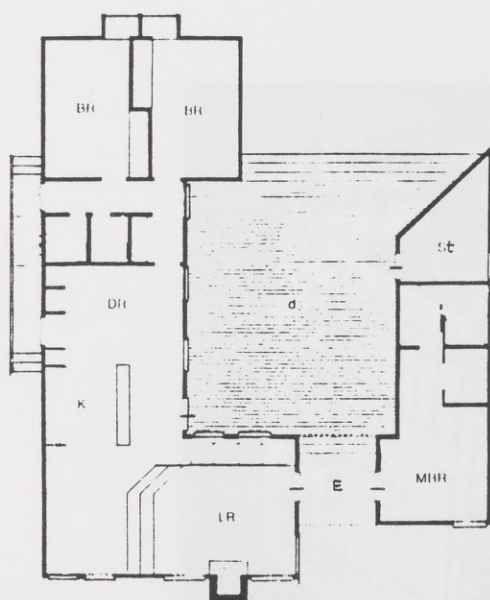


American:

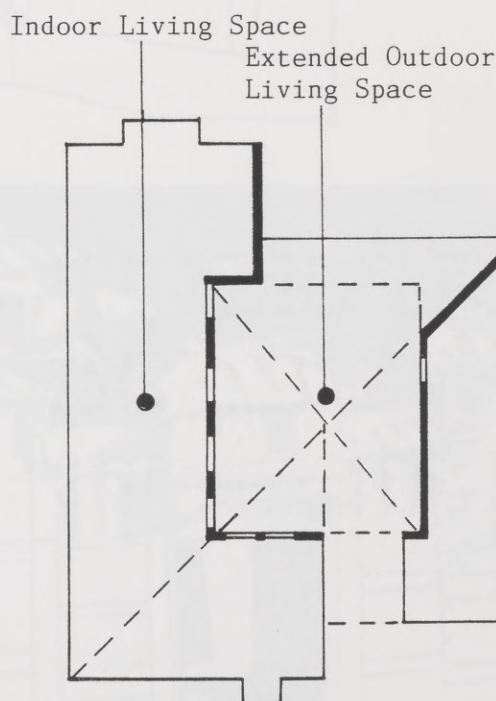
The design of a courtyard and its enclosure are cooperative matters in the American house. The quality of a courtyard is determined by the orderly arrangement of openings in the enclosing facades, rather than a random pattern of doors & windows. In other words, the courtyard is a part of nature and the extension of indoor living space. This mutual relation effects the design of the enclosure.



A totally different quality of courtyard results by slightly changing the form of enclosure.

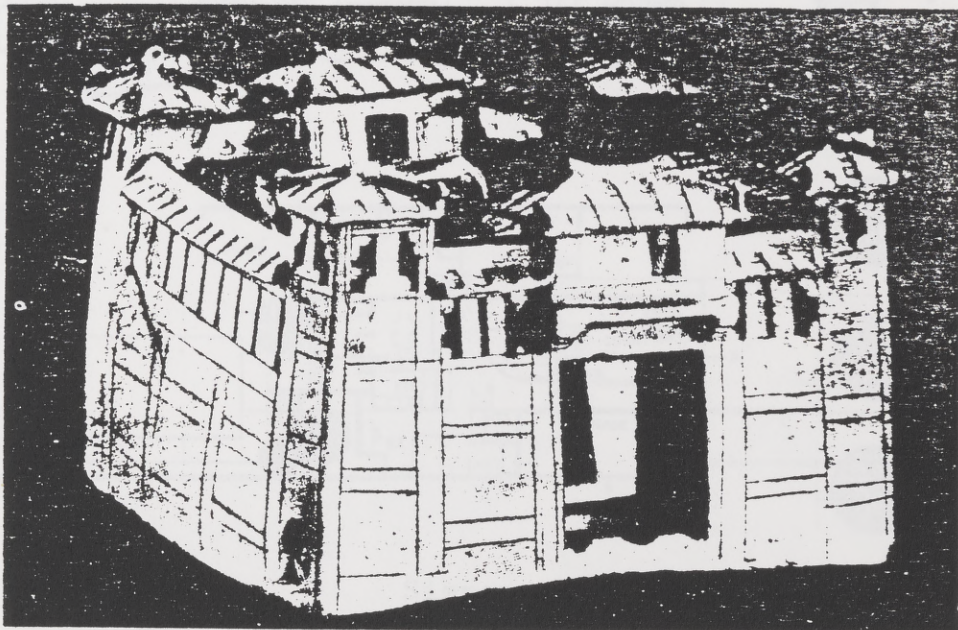
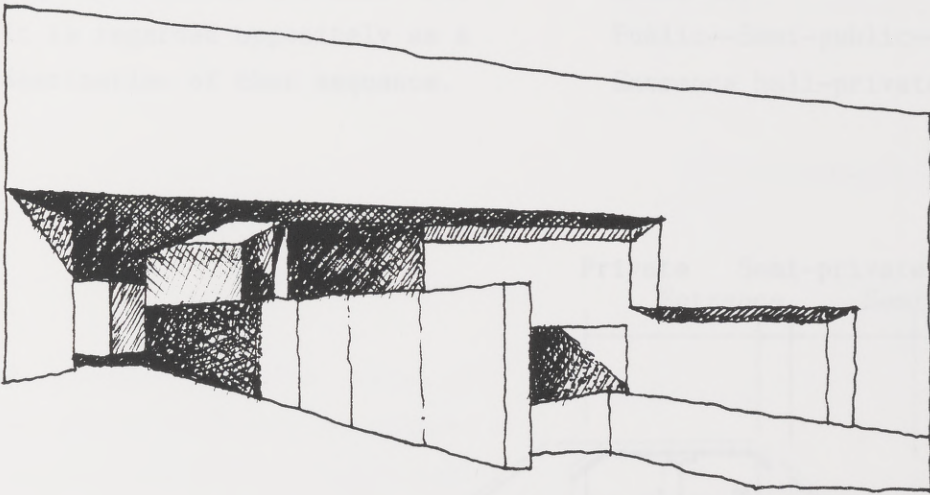


Salter House, Stinson Beach, California, 1964.  
Architects: MLTW Associates



The diagram of order and opening of the courtyard.

# entrance





## TRANSITION

Location of the entrance hall in traditional Chinese houses & modern American housing differs basically in its transitional intent. In the Chinese house, the entrance hall was considered as a beginning point of the entrance sequence, but in the American, it is regarded oppositely as a destination of that sequence.

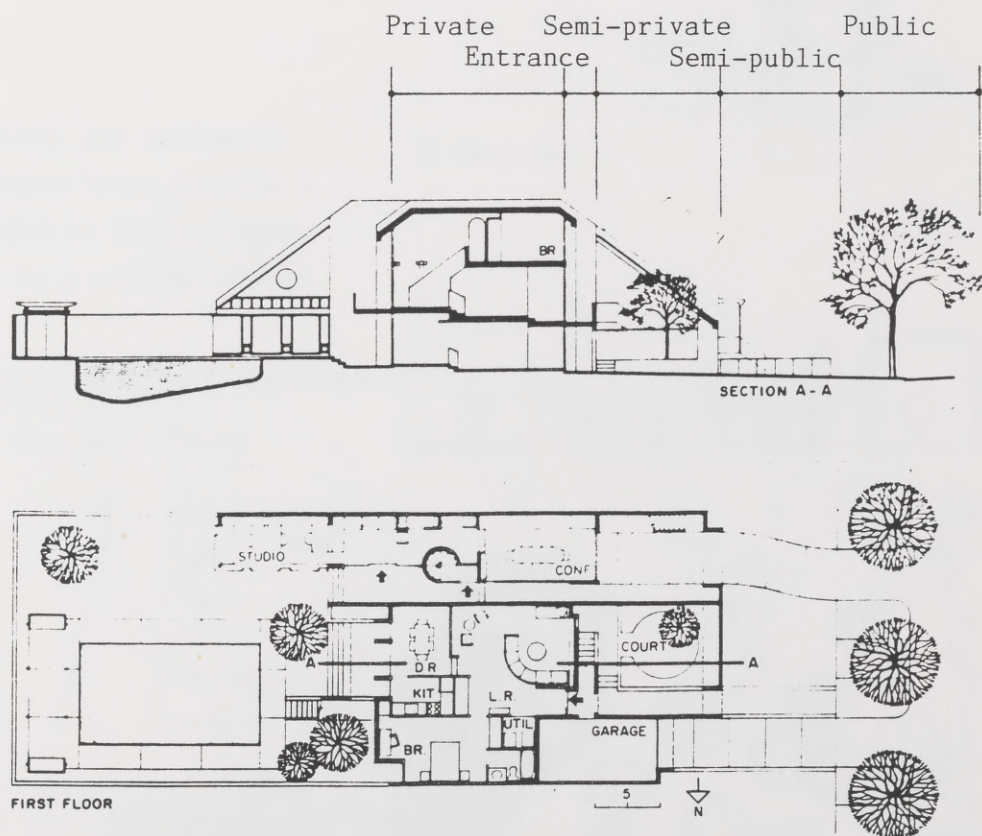
The entrance sequences can be generalized according to the status of intimacy of spaces which compose the entrance.

## CHINESE:

Public--Entrance hall--Semi-private  
--Private

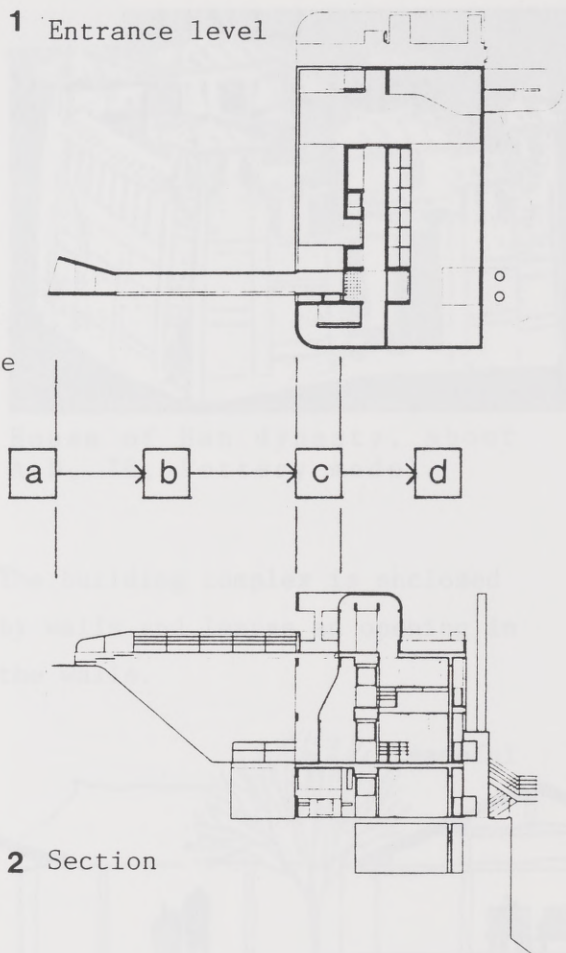
## AMERICAN:

Public--Semi-public--Semi-private--  
Entrance hall-private



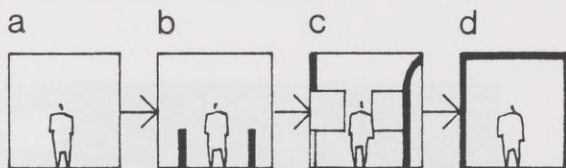
Simmons House, Washington, D.C.  
Architect: Thomas B. Simmons

The idea of entrance transition in the modern American house has been described in the "PATTERN LANGUAGE." A graceful transition can be achieved by having fewer public spaces between the outside and the main entrance to reduce the feeling of public behavior and to gradually settle down into the more intimate spirit appropriate to a house.

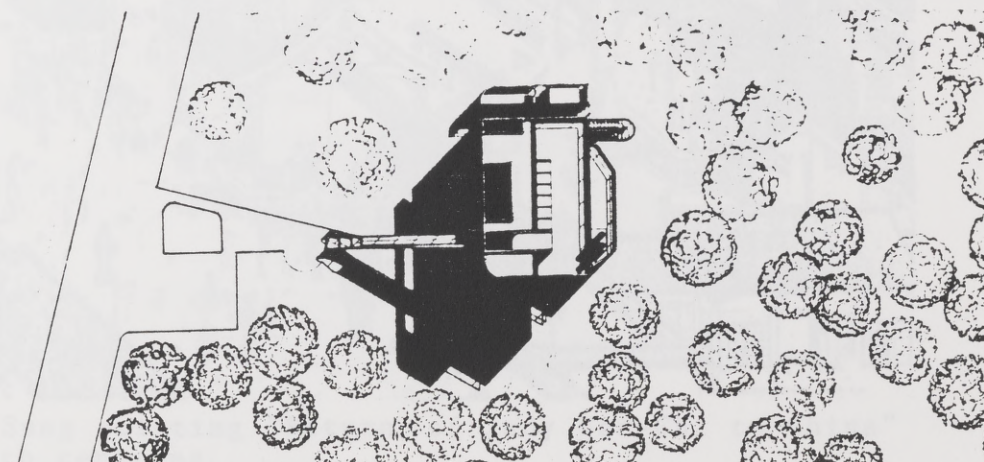


An example shows the change of enclosing intensity to achieve a gradual transition from a public street space to a private indoor space.

Douglas House, Harbour Springs  
Michigan, 1973  
Architect: Richard Meier



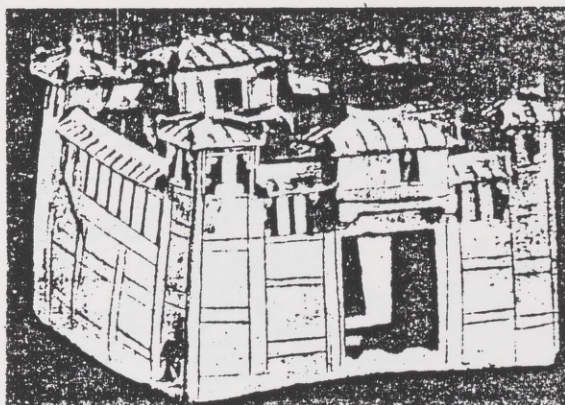
3 Site





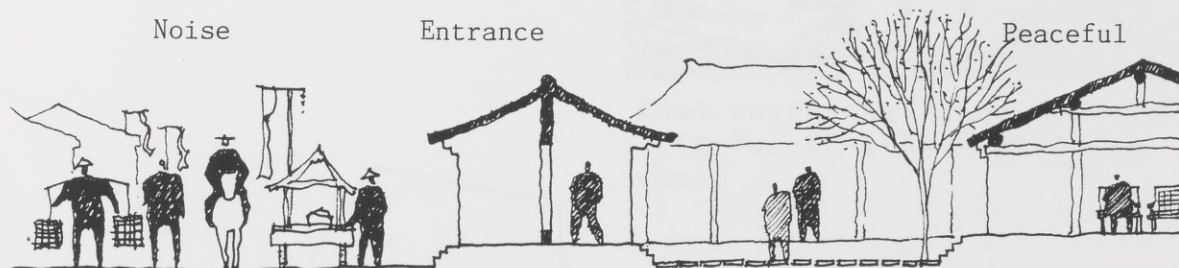
In the traditional Chinese house the entrance hall is the only visual and accessible connection with the outside.

The entrance transforms space between two open spaces to transfer a person from a crowded, busy atmosphere on the street to an easy, peaceful inner courtyard.



House of Han dynasty, about A.D. 76, Pottery model.

The building complex is enclosed by walls and leaves an opening in the walls.



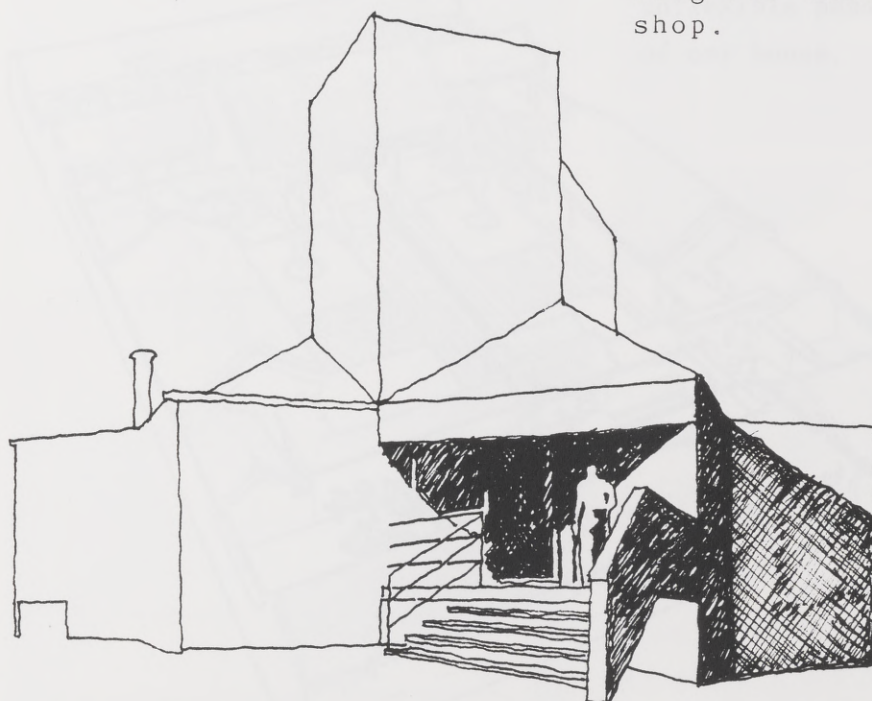
Part of a Sung painting "Return of lady Wen-Chi to China" 11th to 12th centuries.



The transforming function of entrances in the Chinese house have been used only in one particular way. They divide public and private spaces. They help in forming the freestanding and unique style of the entrance. But entrances of the American house are mostly subjected to the main building instead of having a separated mass.



Wood engraving, Ming dynasty, Jung-Pao-Chai hand-printing shop.

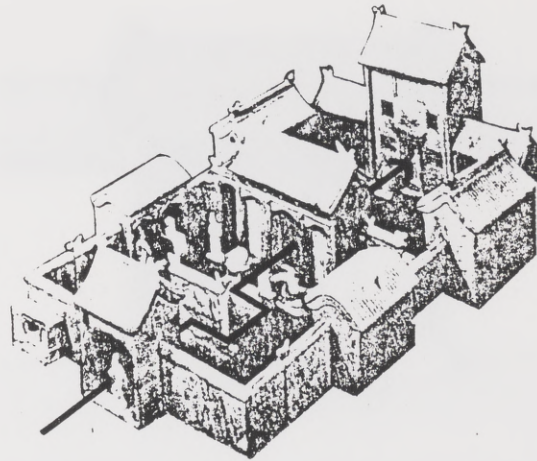


Adams Residence, Roseau, Minnesota  
Architect: Thomas N. Larson.



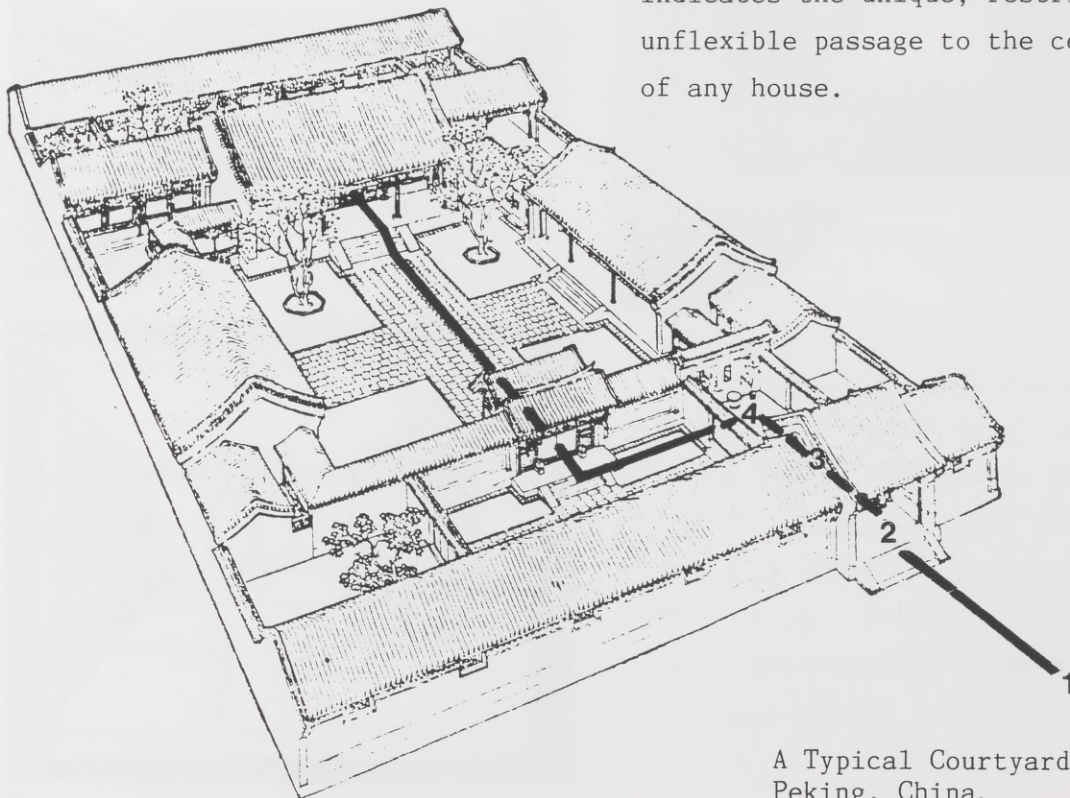
## VIEW &amp; DIRECTION

The view of the entrance is important as it is the only accessible connection with the street from the Chinese house. It is surprising to find such a narrow, long space devoted to its development, compared to the whole house. However, by narrowing the entrance space, its projection as viewed from the approach is much more impressive. (See the visual sequence 1 to 4 on next page related to the bird-view perspective below)



House of Han Dynasty, Pottery Model.

The zigzag path with 90-degree turns is the most common entering path in the Chinese house. It indicates the unique, restrictive, unflexible passage to the center of any house.

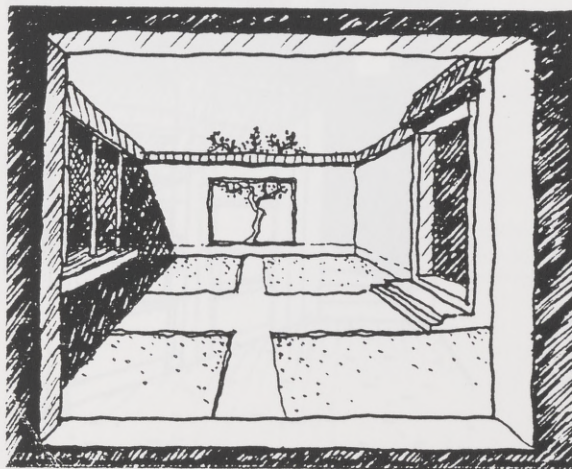
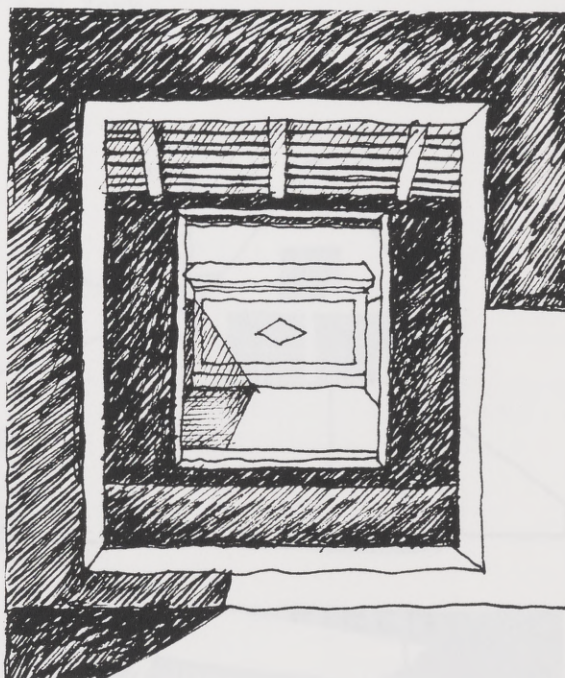
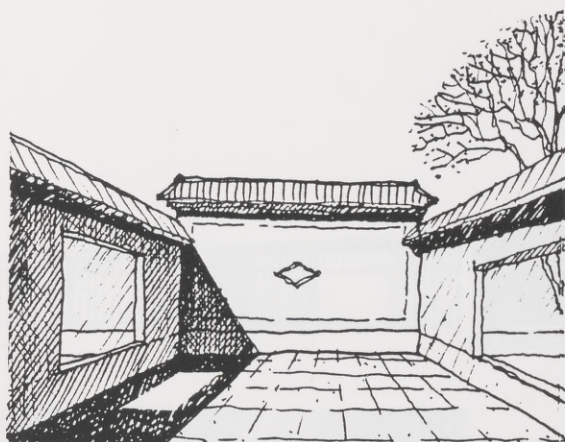
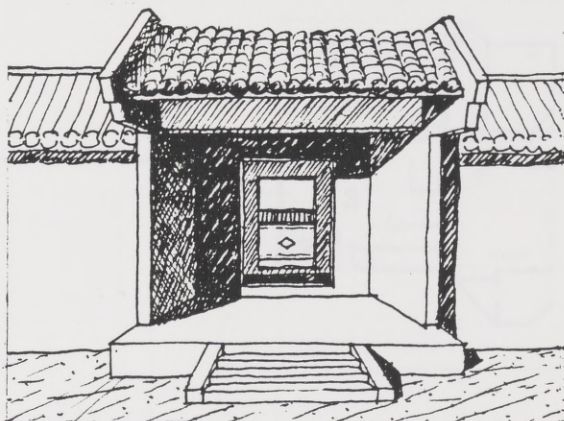


A Typical Courtyard House, Peking, China.



The main ideas of view and direction of entering is that a new view is conceived at each stage of movement within the zigzag path. All the consecutive focal views are linked together creating a sense of movement.

The entrance elevation is the primary building facade of the house that can be seen from the street.(figure 1)

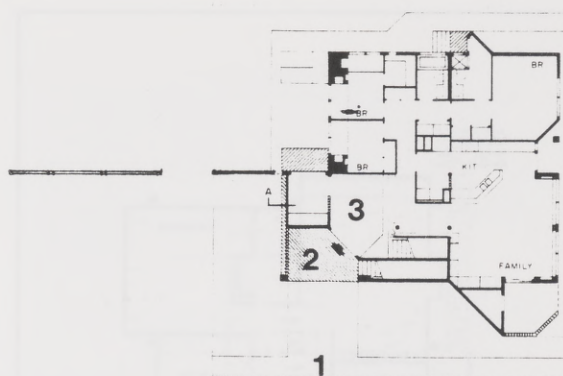


When approaching the gateway, one's line of vision is blocked by a screen wall. The use of the walls as screens to block and direct the visitors' movement keeps the inner part a mystery and gives rise to anticipation of discovery. (figures 2 and 3)

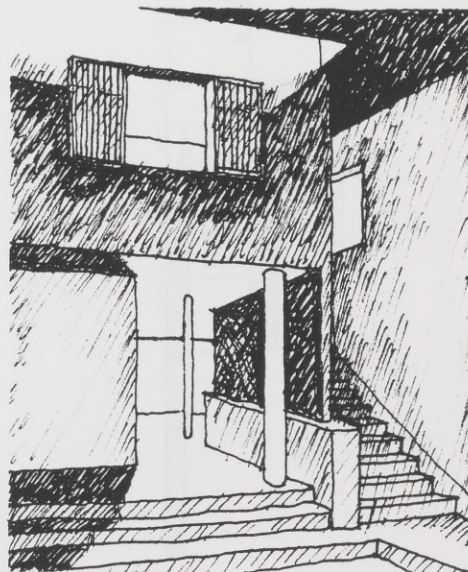
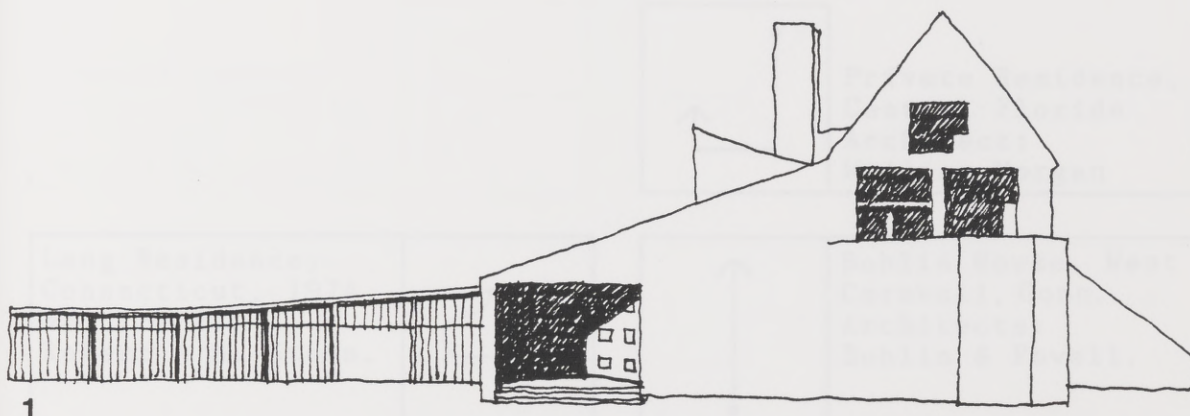


The views conceived by a person approaching the entrance of the American house can be generalized into three consecutive views.

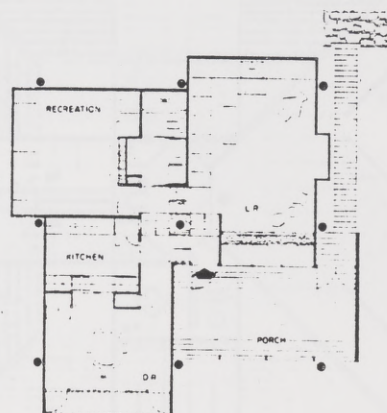
1. A view of the house outline and entrance form.
2. A view of the gateway.
3. A view of the foyer.



Private House, Long Island,  
New York.  
Architects: Eisenman & Robertson

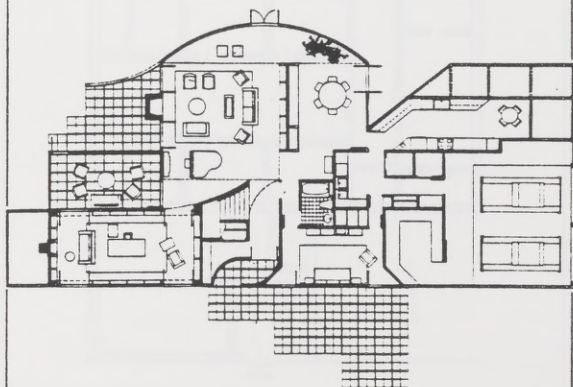
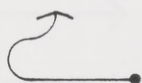


The direction of the moving path from the garage or street to the entrance gateway can be simplified into a linear form. The diversities of the linear forms of the moving path are the significant attributes in the American house entrances in contrast to the monozigzag, 90-degree turning path of the Chinese house.

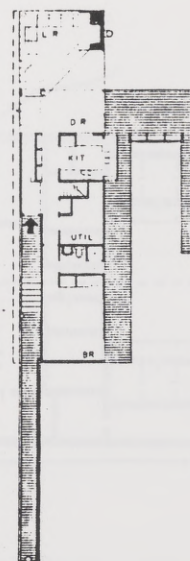


Private Residence,  
Central Florida  
Architect:  
William Morgan

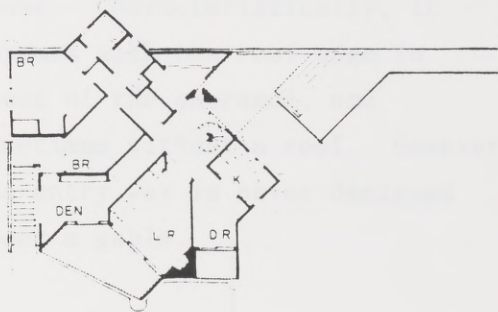
Lang Residence,  
Connecticut, 1974  
Architect:  
Robert A.M. Stern.



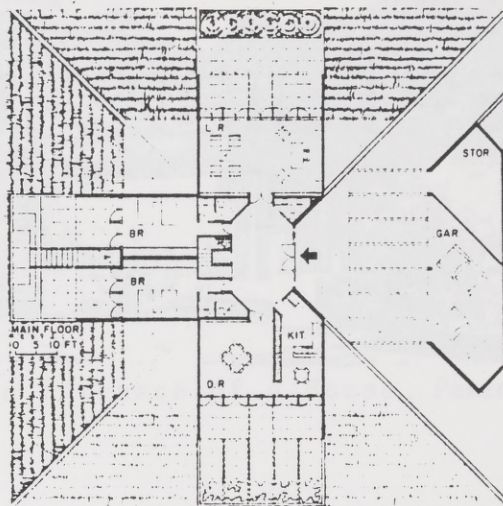
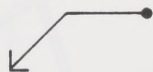
Bohlin House, West  
Cornwall, Conn.  
Architects:  
Bohlin & Powell.







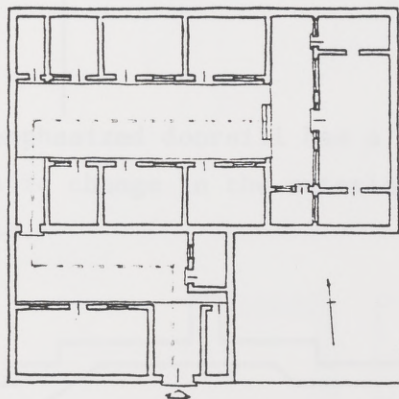
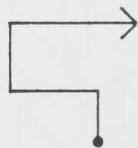
Adams Residence  
Roseau, Minnesota  
Architect:  
Thomas N. Larson



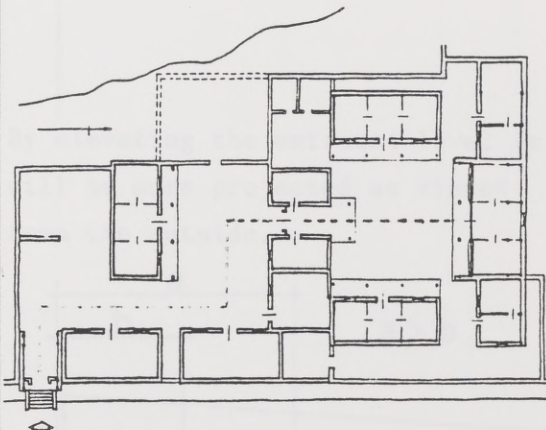
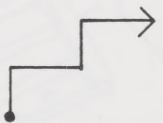
Private Residence,  
Central Florida  
Architect:  
William Morgan



Private Residence,  
Chin Ts'u Town,  
Tai Yung City,  
San Hsi Province,  
China



Fu House, Ta Chou,  
San Tung Province,  
China

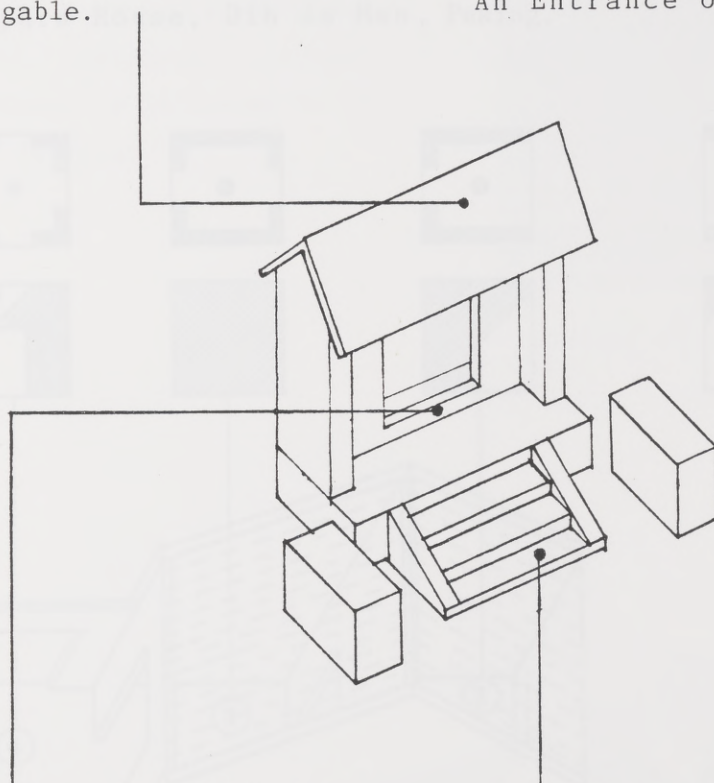


## SPACES &amp; ELEMENTS

The design of the entrance roof is very unique in the Chinese house. Characteristically, it appears with the roof edge in front of the entrance, and sometimes without a roof. However the entry way is never designed under a gable.

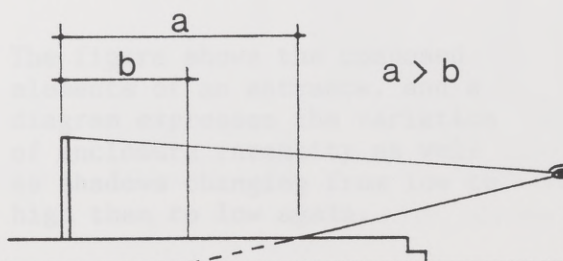
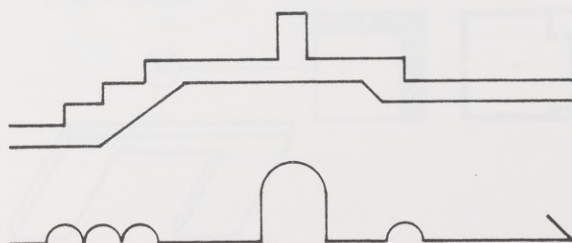


An Entrance of a House, Peking.

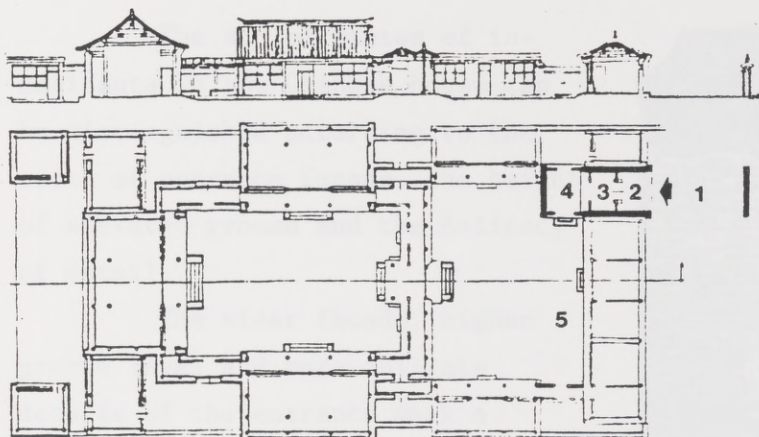


The emphasized doorsill has a dramatic change in the entering action.

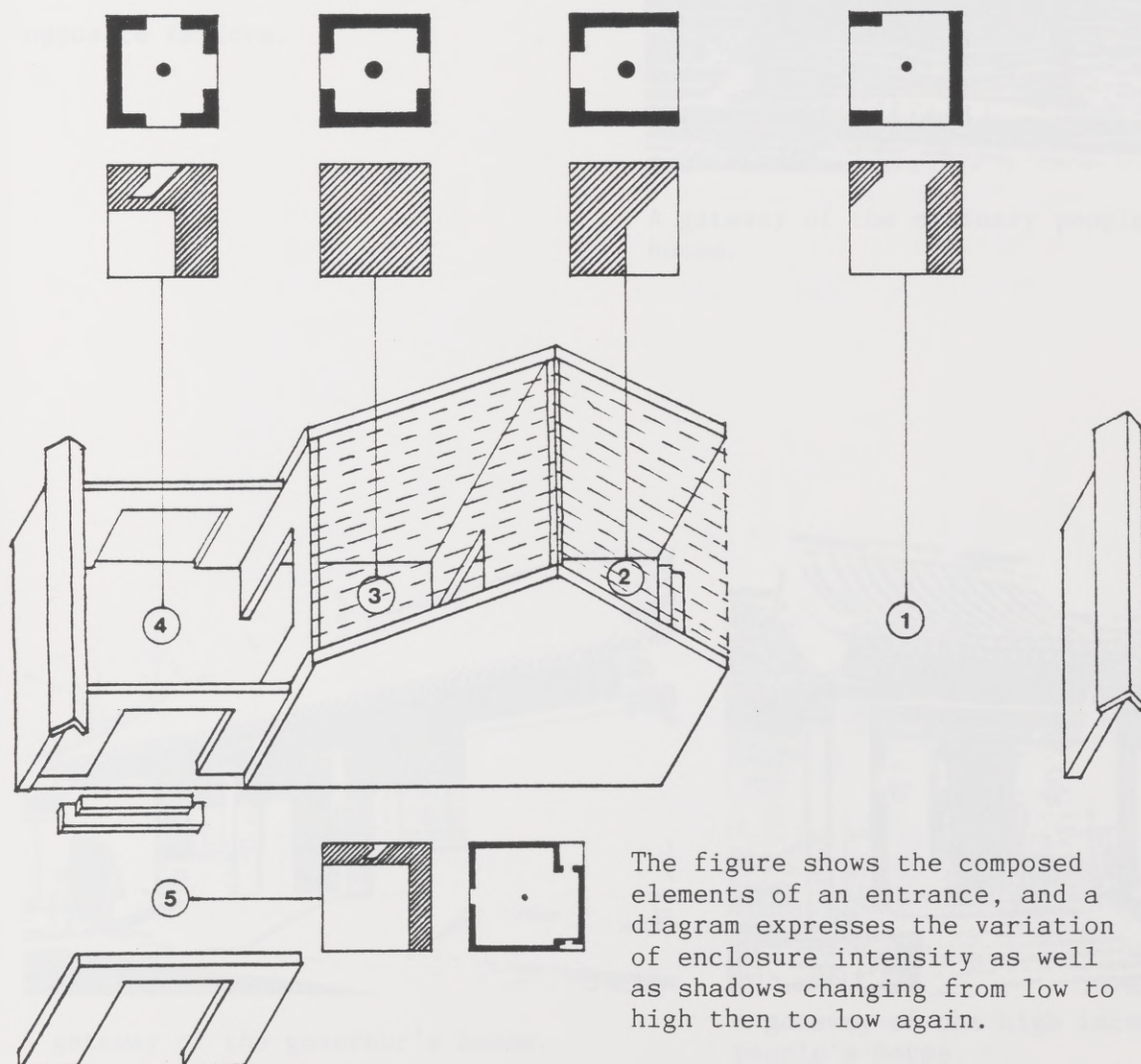
By elevating the entrance level it will be more projected as viewed from the outside.







A Courtyard House, Dih An Men, Peking.



The figure shows the composed elements of an entrance, and a diagram expresses the variation of enclosure intensity as well as shadows changing from low to high then to low again.



The social status of inhabitants in the Chinese house can be distinguished according to the width of entrance facade, the height of elevated ground and the delicacy of detail.

The wider facade, higher ground level and more delicate details of the entrance mark a higher social status of the inhabitants. Contrarily, a lower social status is indicated by the opposite factors.



A gateway of the ordinary people's house.



A gateway of the governor's house.

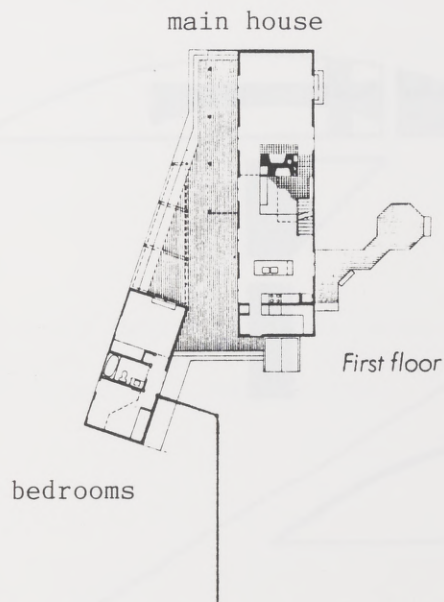


A gateway of the high income people's house.



The entrance types in terms of spaces & elements can be divided into four categories in the American house.

- I) The entrance is formed by clustering buildings. This type of entry has its housing masses separated functionally and makes a space inbetween which has an impressive image of leading the visitors, naturally, into the house.

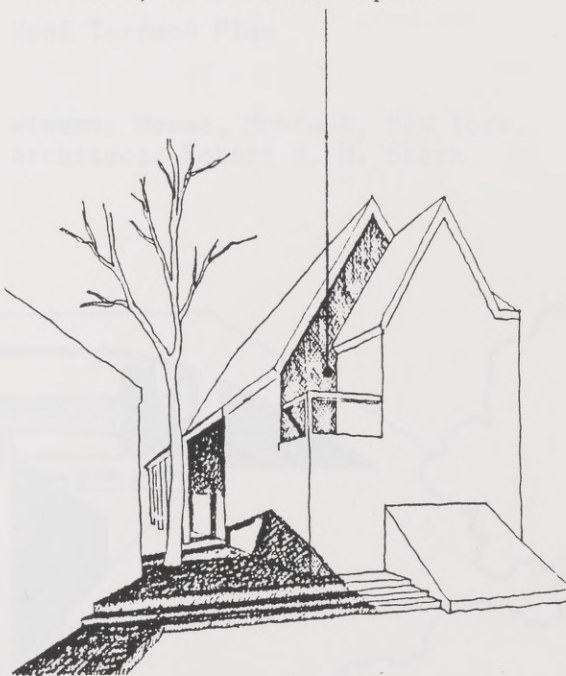


As a screen wall leading movement to the main house.

The main part of the house has an adequate length to emphasize the longitudinal movement.



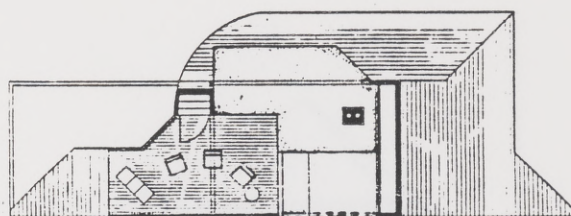
The second-floor void balcony eliminates the sharp intrusion and brings the entry into an intimate, human-scale space.



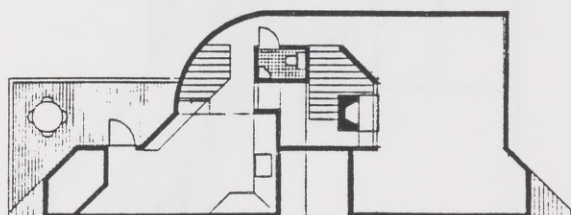
Swan House, Long Island, New York.  
Architect: Charles Moore

II) The entrance is formed by digging into the building mass: The alcove space has been devoted to the entry in contrast to the other flat part of the building facade indicating an inward movement.

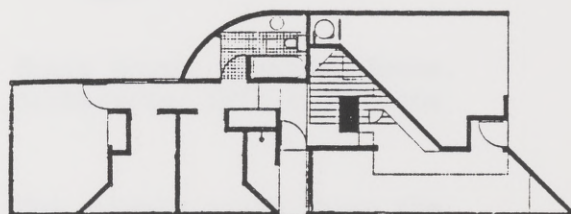
The significance of this kind of entry is made by creating shadows and carving the forms of alcoves.



First Floor Plan



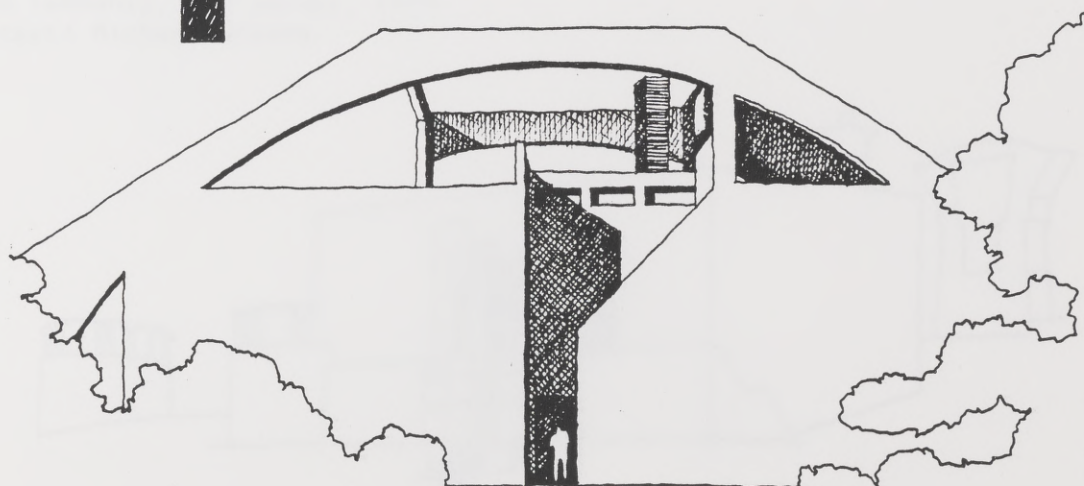
Second Floor Plan



Roof Terrace Plan



Wiseman House, Montauk, New York.  
Architect: Robert A. M. Stern.





III) The entrance is formed by projecting elements out of the building mass:  
The projecting element might be a porch, a bridge or a decorative symbol... etc. It reveals and states the entry more positively and directly.

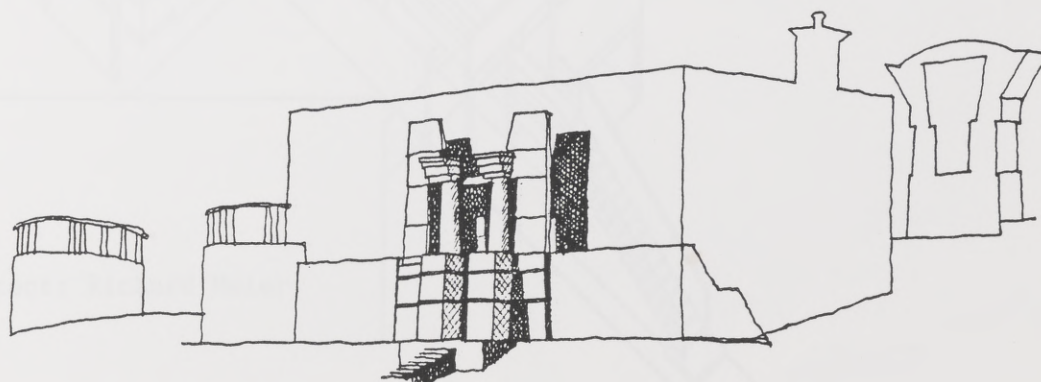


The example below is a functionless entrance gate with philosophical meaning attached to the building and forming the sign of entry, actually, it is a quotation from historical architecture.

Mixon House, Houston, Texas.  
Architects: Taft Architects

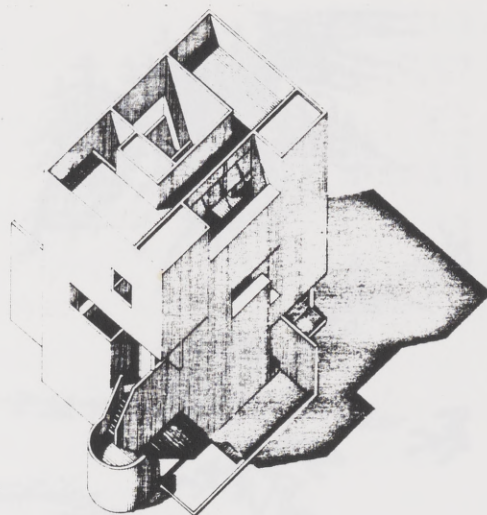
The example above shows the projecting stair with covered porch leading to the second-floor entrance.

Ploceck House (Keystone House)  
Warren Township, New Jersey, 1979.  
Architect: Michael Graves

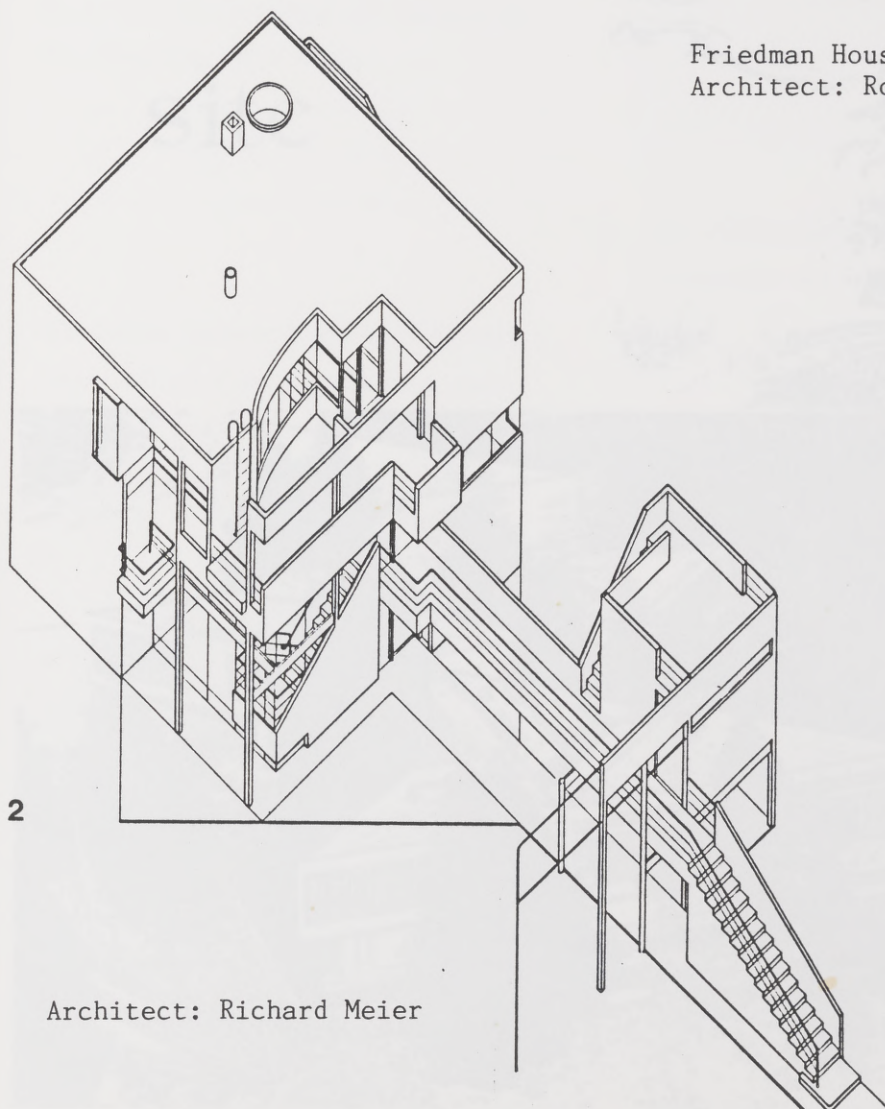


IV). The fourth type of entry is a combination of two or all of those types described before:

1. The combination of the projecting stair and entry alcove.
2. The combination of the projecting bridge, entry alcove and inbetween path of two buildings.



Friedman House, South Florida.  
Architect: Robert Whitton



Architect: Richard Meier



site





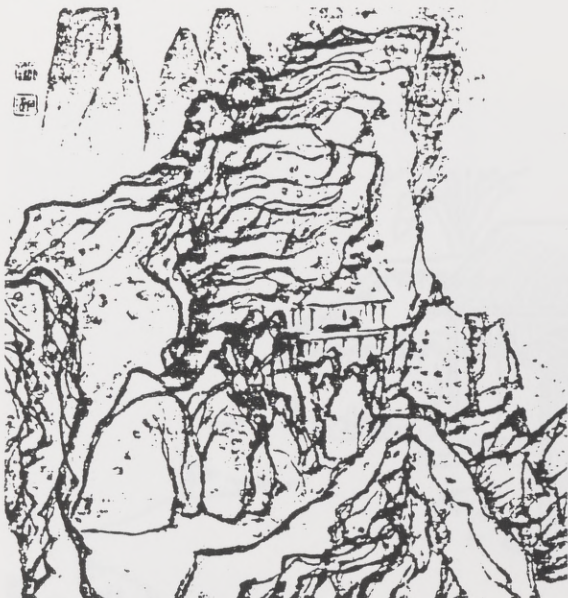
## SITE &amp; NATURE

## Chinese :

For centuries, the Chinese people have been taught by their sages that for those who adapt their lives to nature will be prosperous, but for those who oppose their lives to nature will be degenerate.

The abode should be a place of affection by deeply adoring and enjoying the riches of nature in the choosing of a site.

The house beneath a cliff gives a sense of protection, and a subordinate relationship to nature.

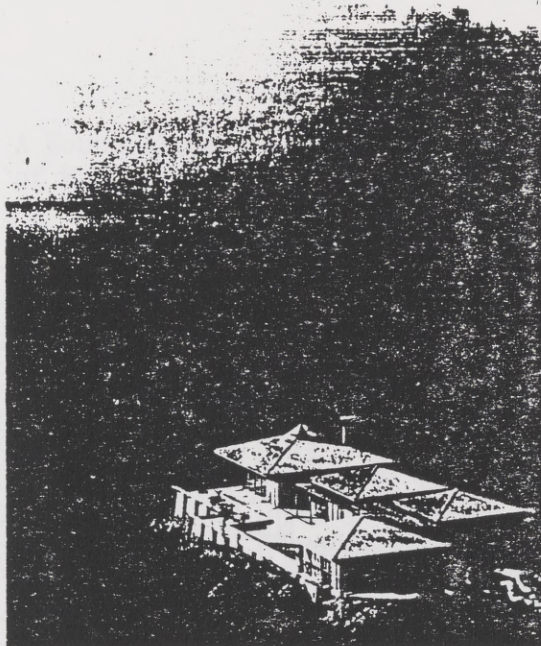


Tao-Chi (1641-1717)  
Nu Wa Chai Collection.

## American :

Because of the predominant Christian background of America, most people believe that nature was created by God for men to dominate and utilize. It becomes a strong subliminal image of overcoming nature and brings forth siting concepts different from the Chinese.

The mountain-top view is the highest enjoyment of a mountain site.



Pence House, Mill Valley, Cal. 1965  
Architects: Marquis & Stoller.



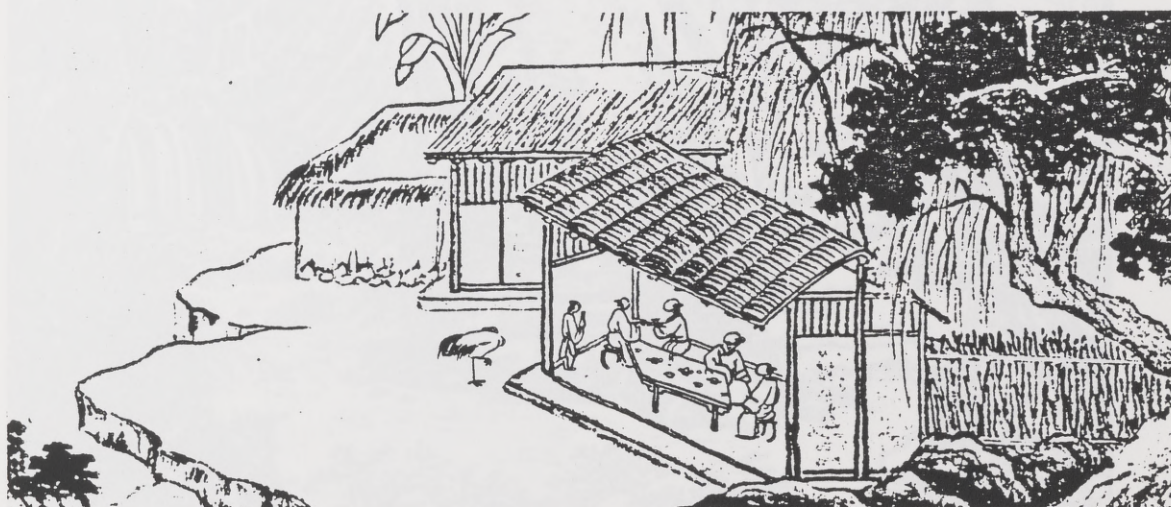
The house in Belvedere has the structure suspended over the cliff, highly expressing the designer's intention - a house of strength and excitement. The cantilever-house not only reveals itself as a unique house but also signifies the character of the cliff. The contrast between nature and the artificial is fully expressed in this project. (figure right)

In the Chinese painting below, the house is located at an optimum distance from the cliff. The distance ensures peaceful living and enjoyment of the beautiful scenery at the same time.



Private House, Belvedere, Cal. 1957  
Architect: Rockrise.

A House Alone the Cliff. Collection  
of Museum of Fine Arts, Boston.





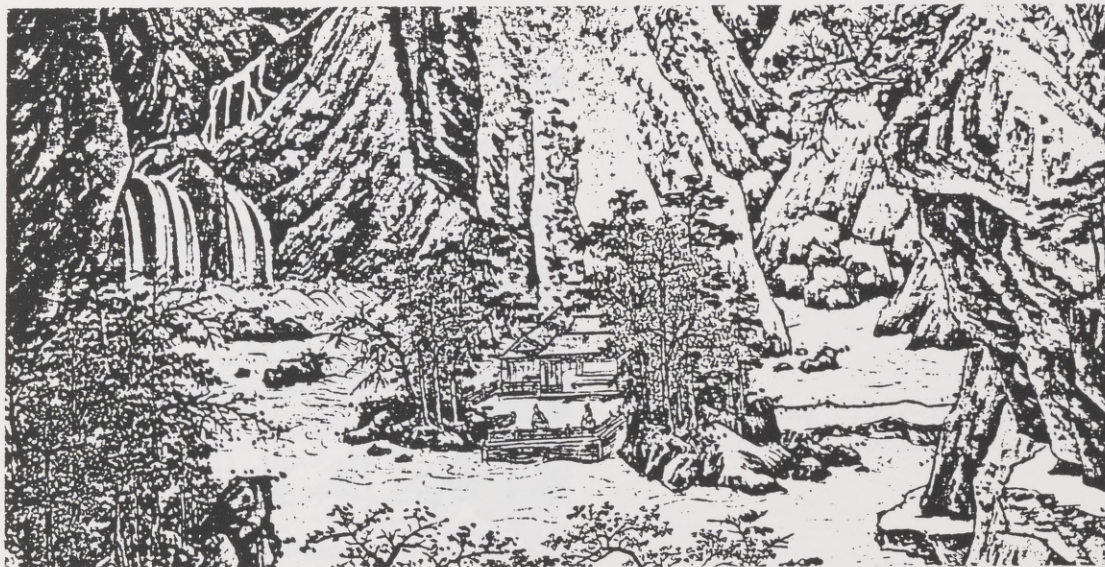
Falling water is a good example of how mingling nature with the artificial can produce a delightful result. The building masses are set up as part of the rocks, out of which water flows. The water also becomes the essence, the beauty of the house. (figure right)

The idea of admiring and enjoying nature in Chinese houses has been fully manifested in the painting below. The admiration of the waterfall tends to site the house a distance from the fall, but the love of water leads to a siting on the shore.



Falling Water, Bear Run, Penn. 1936  
Architect: Frank Lloyd Wright.

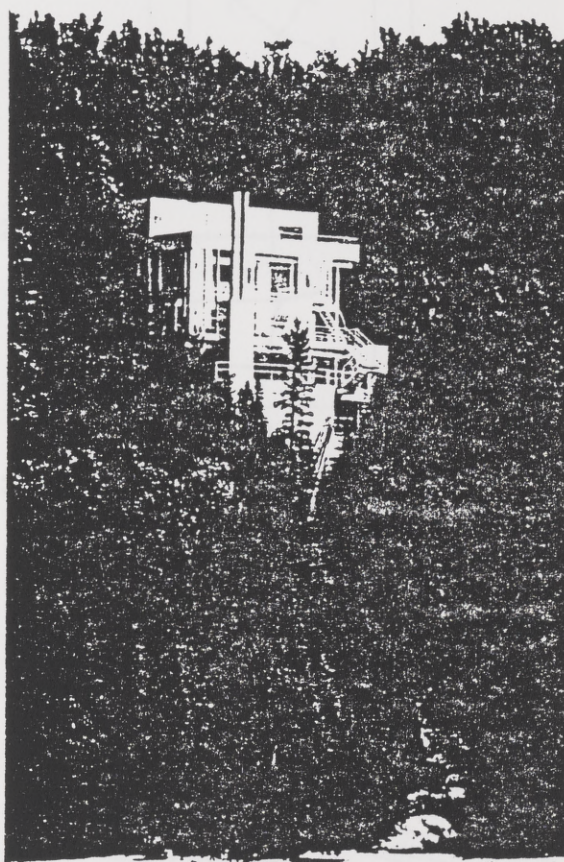
Ch'iu Ying (1510-1551) Freer Gallery  
of Art, Washington D. C.





The giant, white body of the five-storyed Douglas house bursts out of the forest. The continuity of the canopy of trees has been broken, and the contrast between the natural forest and the artificial materials has been strongly emphasized. (figure right)

In the Chinese painting below, the house is built in the forest with an intention of enjoying the shade, coolness, obscure views and mystery. Those are the natural beauties of the forest given to men to appreciate.



Douglas House, Harbour Springs, Michigan, 1973.  
Architect: Richard Meier.



Sun K'o-hung (1532-1610)  
Palace Museum Collection, Taichung, Taiwan.



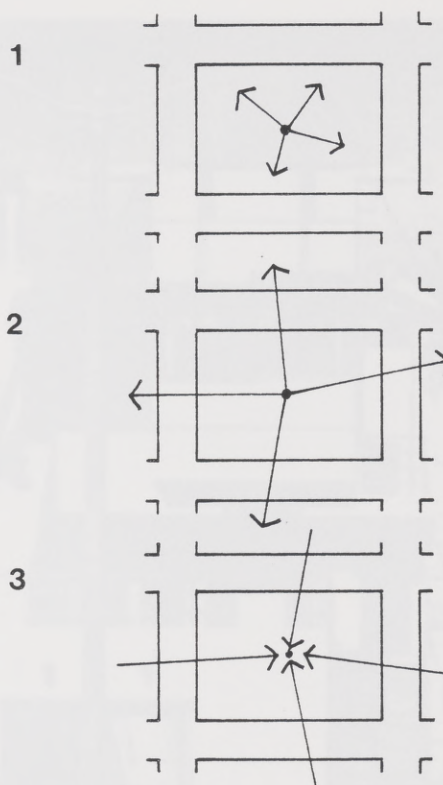
## SITE & VIEWS

There are three types of visual concerns that can be generalized from site design of houses in cities.

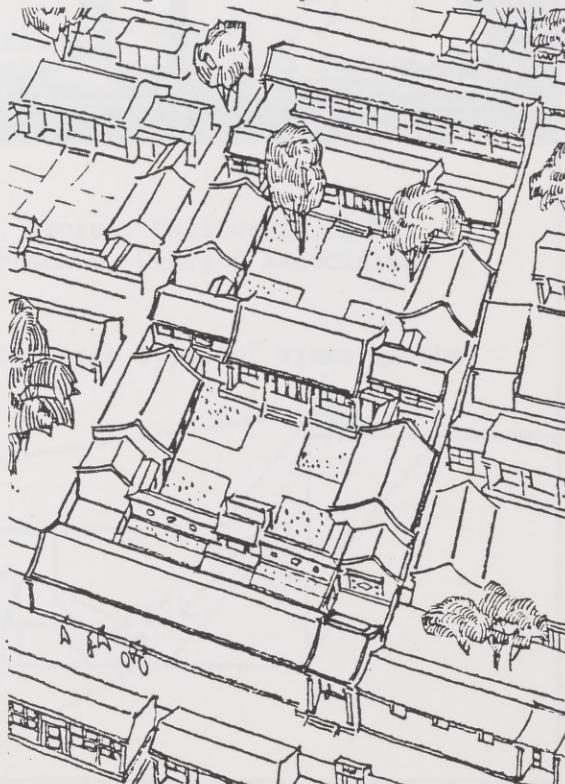
- 1) The view within the site.
- 2) The view from the site to the neighbourhood.
- 3) The view from the neighbourhood to the site.

In the traditional Chinese house, only the first type of view has been adopted commonly. The other two types of views happen rarely. But in modern American houses, the three types of views have equal position in the visual concerns of the site design.

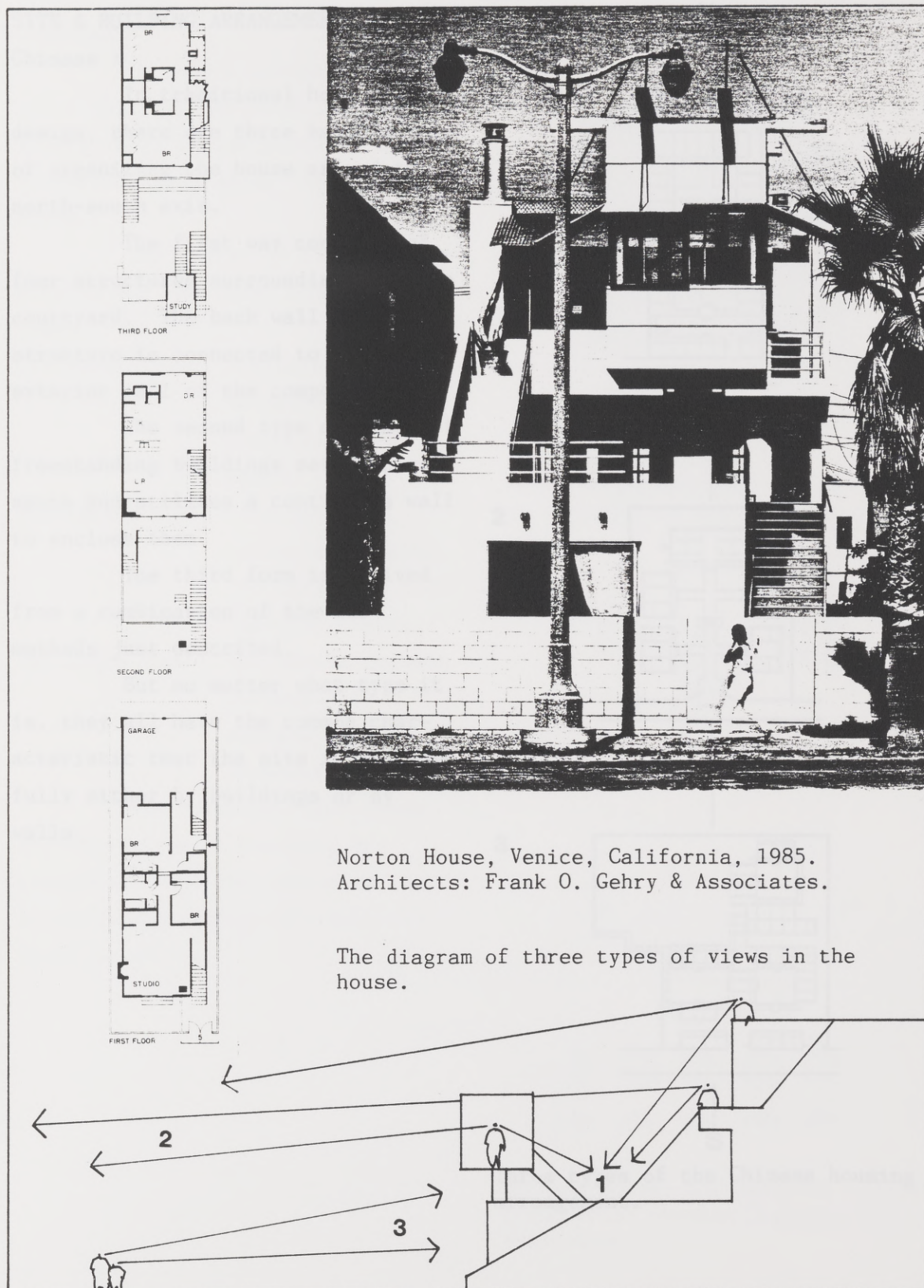
The courtyard house at right shows the importance of inside views from the courtyard to the surrounding buildings, but ignores the views to and from the neighbourhood.



Hu-T'ung Lane Complex, Peking







## SITE & BUILDING ARRANGEMENT

### Chinese :

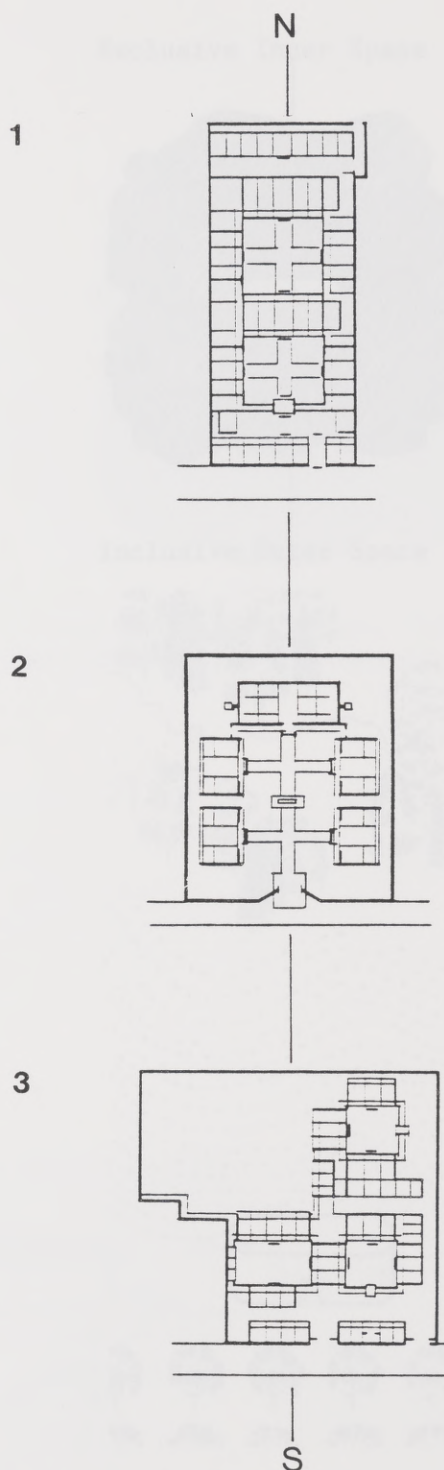
In traditional house design, there are three basic ways of organizing the house around the north-south axis.

The first way consists of four structures surrounding a square courtyard. The back wall of each structure is connected to form the exterior wall of the compound.

The second type consists of freestanding buildings set within a space and utilizes a continuous wall to enclose them.

The third form is derived from a combination of the two methods just described.

But no matter what type it is, they all have the common characteristic that the site is enclosed fully either by buildings or by walls.



Three types of the Chinese housing arrangement.



American :

In modern American houses, their edifices are sometimes divided into several unique parts to include inbetween space among the building masses.

The status of the building arrangement has three consecutive types.

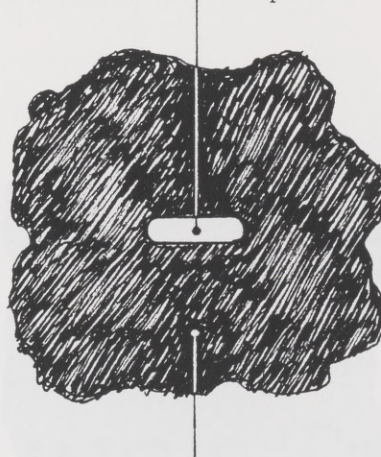
The first type - A single structure is surrounded by the outer open space.

The second type - The single structure begins to burst out into several masses.

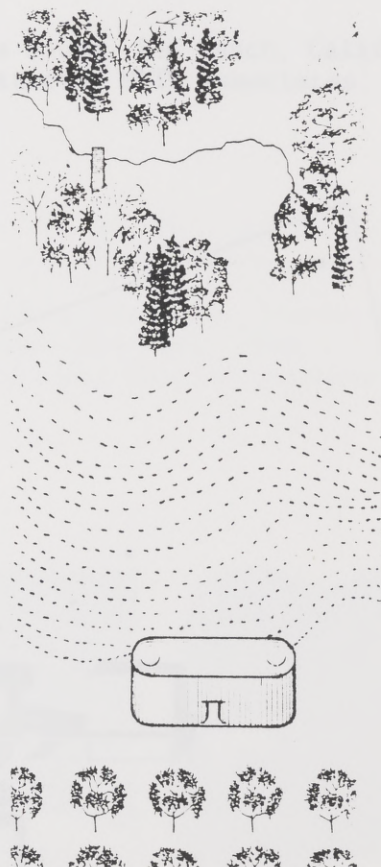
The third type - The masses radiate outwardly to a certain balanced distance.

The house at right shows the first type of building arrangement; that the exclusive inner space is enclosed by the inclusive outer space.

Exclusive Inner Space

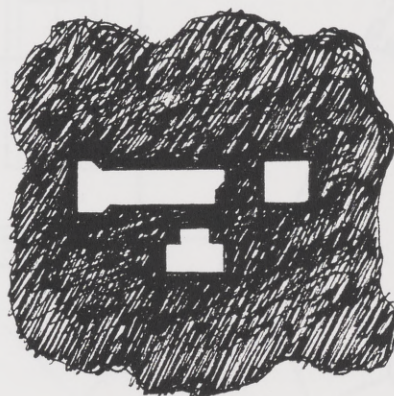


Inclusive Outer Space



Private House, Northwestern Illinois  
Architects: Stanley Tigerman & Associates.

The second type of building arrangement expressing the unique inner space has been broken into several separate parts according to different functions. At the same time, the outer space begins to penetrate into the space inbetween the building masses. The outer and inner spaces mingle with each other.



Hines House, Sea Ranch, California,  
Architects: MLTW Associates.

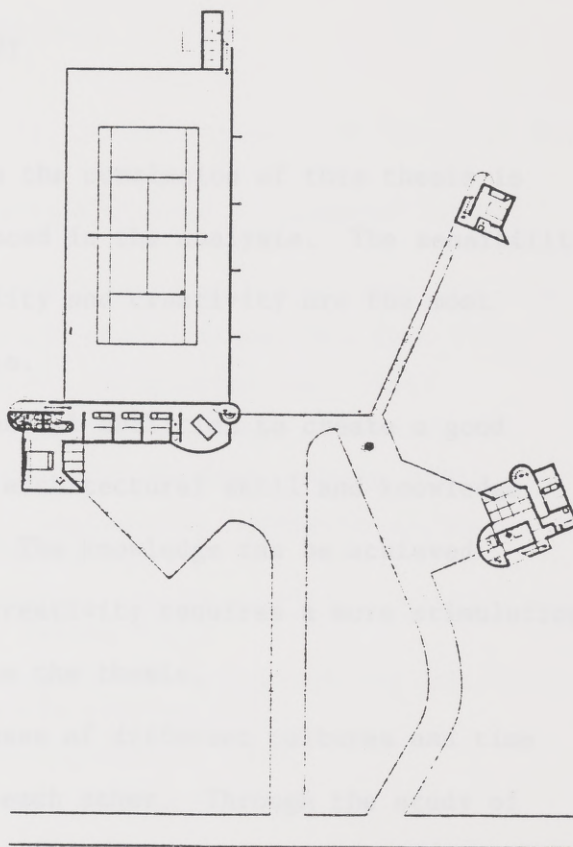




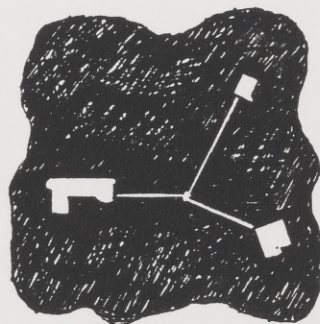
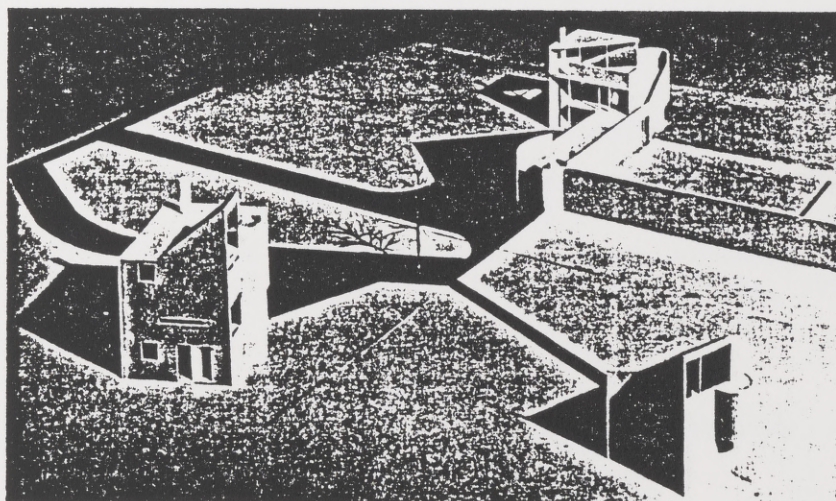
The last type in the radiating process is that, seemingly all the masses are separate from each other at a certain distance, but inwardly there is a centripetal force pulling them together as a whole.

The optimum distance is more or less determined by the volume of each mass and the functional reliance to each other.

In the Gwathmey house and studio, the inner space and outer space are equivalent in a balanced status that has both the essences of types one and two.



Gwathmey House and Studio, Long Island, New York, 1966  
Architect: Charles Gwathmey



## SUMMARY

The most important element in the conclusion of this thesis is not the result, but the process evidenced in the analysis. The sensibility and the analytic ability to space quality and creativity are the most precious efforts gained from the thesis.

Every designer needs two essential abilities to create a good design, one is the basic education of architectural skill and knowledge, the other one is inherent creativity. The knowledge can be achieved through sufficient teaching, but the creativity requires a more stimulating way of exploring, which is presented in the thesis.

The patterns derived from houses of different cultures and time periods are in great contradiction to each other. Through the study of their patterns, not only the difference and similarity are clearly identified but also the possible harmonious combination is revealed.



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